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United States Department of Agriculture,

WASHINGTON, D. C., January 31, 1918.

MONTHLY LIST OF PUBLICATIONS.

[JANUARY, 1917.]

1918

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A copy of any of the publications listed herein, except those otherwise noted, may be obtained free upon application to the Chief of the Division of Publications, United States Department of Agriculture, Washington, D. C., as long as the department's supply lasts.

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SPECIAL NOTICE.

Before mailing your request be sure and see that your name and complete post-office address (street number or rural route number as the case may be) is attached.

FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

~~DO~~ NOTE.—The department's supply of the current numbers of Farmers' Bulletin is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy unless otherwise noted.

Cranberry Insect Problems and Suggestions for Solving Them. By H. B. Scammell, Entomological Assistant, Deciduous Fruit Insect Investigations. Pp. 45, figs. 37. Contribution from the Bureau of Entomology. (**Farmers' Bulletin 860.**)

Supersedes Farmers' Bulletin 178, and is of interest to all cranberry growers.

Irrigation of Alfalfa. By Samuel Fortier, Chief, Irrigation Investigations. Pp. 40, figs. 36. Contribution from the Office of Public Roads and Rural Engineering. (**Farmers' Bulletin 865.**)

A revision of Farmers' Bulletin 373, and is of interest to Alfalfa growers generally.

Making Butter on the Farm. By William White, Dairy Division. Pp. 23, figs. 18. Contribution from the Bureau of Animal Industry. (**Farmers' Bulletin 876.**)

Supersedes Farmers' Bulletin 541, and is for general distribution.

Advice to Forest Planters in the Plains Region. By Seward D. Smith. Pp. 23. Contribution from the Forest Service. (**Farmers' Bulletin 888.**)

For distribution in the section known as the Great Plains Region.

Standard Varieties of Chickens. II. The Mediterranean and Continental Classes. By Rob R. Slocum, Animal Husbandry Division. Pp. 26, figs. 22. Contribution from the Bureau of Animal Industry. (**Farmers' Bulletin 898.**)

Describes the Leghorn, Minorca, Whitefaced Black Spanish, Blue Andalusian, Ancona, and Campine breeds of chickens.

Fire Prevention and Fire Fighting on the Farm. By H. R. Tolley, Scientific Assistant, and A. P. Yerkes, Assistant Agriculturist. Pp. 16, fig. 1. Contribution from the Office of Farm Management. (**Farmers' Bulletin 904.**)
For general distribution.

A Successful Community Drying Plant. By C. W. Pugsley, Director of Agricultural Extension, University of Nebraska. Pp. 12, figs. 9. (**Farmers' Bulletin 916.**)

Suitable for general distribution.

DEPARTMENTAL BULLETINS—TECHNICAL.

The publications listed below are technical or scientific treatises of bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

The Mediterranean Fruit Fly in Hawaii. By E. A. Back, Entomologist, and C. E. Pemberton, Assistant Entomologist, Mediterranean and Other Fruit-Fly Investigations. Pp. 119, pls. 21, figs. 24. Contribution from the Bureau of Entomology. (Professional Paper.) Jan. 26, 1918. (**Department Bulletin 536.**) Price, 30 cents.

A study of the life history and distribution of this insect, with suggested methods for its control. No copies available for distribution by the department.

The Pecan Leaf Case-Bearer. By John B. Gill, Entomological Assistant, Deciduous Fruit Insect Investigations. Pp. 28, pls. 3. Contribution from the Bureau of Entomology. (Professional Paper.) Dec. 15, 1917. (**Department Bulletin 571.**) Price, 5 cents.

Describes the life history and habits of the insect, and suggests means for its control.

Farm Management and Farm Profits on Irrigated Land in the Provo Area (Utah Lake Valley.) By L. G. Connor, Assistant Agriculturist. Pp. 40, pls. 4. Contribution from the Office of Farm Management. Jan. 7, 1918. (**Department Bulletin 582.**) Price, 10 cents.

Of interest to prospective settlers in the region named.

The 28-Hour Law Regulating the Interstate Transportation of Live Stock: Its Purpose, Requirements, and Enforcement. By Harry Goding and A. Joseph Raub, Bureau of Animal Industry. Pp. 20, pls. 5, figs. 6. Contribution from the Bureau of Animal Industry. Jan. 5, 1918. (**Department Bulletin 589.**) Price, 10 cents.

Of interest to shippers of live stock.

A Method of Calculating Economical Balanced Rations. By J. C. Rundles, Scientific Assistant. Pp. 19. Contribution from the Office of Farm Management. Jan. 14, 1918. (**Department Bulletin 637.**) Price, 5 cents.

Of interest to raisers and feeders of live stock.

Lint Percentage and Lint Index of Cotton and Methods of Determination. By G. S. Meloy, Assistant, Crop Acclimatization and Cotton Breeding. Pp. 12, figs. 2. Contribution from the Bureau of Plant Industry. (Professional Paper.) Jan. 18, 1918. (**Department Bulletin 644.**) Price, 5 cents.

Of interest to cotton planters and breeders.

Some Reasons for Spraying to Control Insect and Mite Enemies of Citrus Trees in Florida. By W. W. Yothers, Entomological Assistant, Tropical and Subtropical Fruit Insect Investigations. Pp. 19. Contribution from the Bureau of Entomology. Jan. 26, 1918. (**Department Bulletin 645.**) Price, 5 cents.

Of especial interest to citrus fruit growers in Florida.

MISCELLANEOUS.

Inventory of Seeds and Plants Imported by the Office of Foreign Seed and Plant Introduction During the Period from October 1, to December 31, 1914. Pp. 67, pls. 4. Dec. 29, 1917. (Inventory No. 41; Nos. 39309 to 39681. Bureau of Plant Industry.) Price, 10 cents.

The Agricultural Situation for 1918. Part I, Hogs. Hog Production Should be Increased. Pp. 24, figs. 2. January, 1918. (Circular 84, Office of the Secretary.) Price, 5 cents.

The first of a series of statements regarding the necessity for increased production of food products in 1918.

SERIALS.

Journal of Agricultural Research. (For sale only.) Vol. 11, No. 13. Dec. 24, 1917. Contents: Structure of the Pod and the Seed of the Georgia Velvet Bean, *Stizolobium deerigianum*. (Ig G-130) By Charles V. Piper and J. Marion Shull.—Decomposition of Green and Stable Manures in Soil. (Ii Iowa-5) By R. S. Potter and R. S. Snyder.—*Eupatorium urticaefolium* as a Poisonous Plant. (lh A-33) By C. Dwight Marsh and A. B. Clawson. Pp. 673-715, pls. 6, figs. 9. Price, 20 cents.

Same, Vol. 12, No. 1. Jan. 7, 1918. Contents: Effect of Time of Digestion on the Hydrolysis of Casein in the Presence of Starch. (II Ky.-6) By J. S. McHargue.—Behavior of Sweet Potatoes in the Ground. (In G-131) By Heinrich Hasselbring.—Studies in Soil Reaction as Indicated by the Hydrogen Electrode. (lo N. C.-7) By J. K. Plummer. Pp. 31, fig. 1. Price, 10 cents.

Same, Vol. 12, No. 2. Jan. 14, 1918. Contents: Pure Cultures of Wood-Rotting Fungi on Artificial Media. (Ip G-132) By W. H. Long and R. M. Harsch.—Gossypol, the Toxic Substance in Cottonseed. (Im N. C.-8) By W. A. Withers and Frank E. Carruth.—Fruit-Fly Parasitism in Hawaii During 1916. (Is K-59.) By C. E. Pemberton and H. F. Willard. Pp. 33-108, pl. 1, figs. 3. Price, 20 cents.

Same, Vol. 12, No. 3. Jan. 21, 1918. Contents: Irrigation Experiments on Apple-Spot Diseases. (Iv G-133) By Charles Brooks and D. F. Fisher.—Relation of Carbon Dioxid to Soil Reaction as Measured by the Hydrogen Electrode. (Iq Cal.-13.) By D. R. Hoagland and L. T. Sharp. Pp. 109-148, pls. 4, figs. 10. Price, 15 cents.

Same, Vol. 12, No. 4. Jan. 28, 1918. Contents: A Study of the Plow Bottom and Its Action Upon the Furrow Slice. (It N. Y. (Cornell)-3.) By E. A. White.—Influence of Nitrates on Nitrogen-Assimilating Bacteria. (Ir Wis.-10.) By T. L. Hills. Pp. 149-230, pls. 4, figs. 26. Price, 25 cents.

NOTE.—Beginning with volume 5 the Journal of Agricultural Research has been issued weekly and is distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. *It will not be sent free to individuals.* The Superintendent of Documents will receive subscriptions for this publication, the price being \$3 per year, 52 numbers.

Experiment Station Record. Vol. 37, No. 7, November, 1917. E. W. Allen, Ph. D., Editor. Pp. 601-700. Price, 15 cents.

Same, Vol. 37, No. 8, December, 1918. Pp. 701-800. Price, 15 cents.

NOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, 10 numbers each, at \$1 a volume.

The Monthly Crop Report. Vol. 4, No. 1, January, 1918. Pp. 1-8. (Bureau of Crop Estimates.)

Contains data relating to agriculture, including estimates of acreage, conditions, yield, prices, and value of crops and live stock. For free distribution.

SERVICE AND REGULATORY ANNOUNCEMENTS—FOR SALE ONLY.

~~All~~ These contain *only* information, instructions, and notices governing the enforcement of food and drugs act, meat inspection, 28-hour and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. *Free distribution* is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals, especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale *only*, at prices noted.

Bureau of Animal Industry. No. 127, November, 1917. Pp. 117-127. Jan. 24, 1918. Price, 5 cents.

Bureau of Chemistry. Supplement 31. [N. J. 5001-5050.] Pp. 1-58. Jan. 28, 1918. Price, 10 cents.

Bureau of Chemistry. Supplement 32. [N. J. 5051-5100.] Pp. 59-121. Jan. 29, 1918. Price, 10 cents.

Federal Horticultural Board. No. 46. November, 1917. Pp. 135-142. Jan. 7, 1918. Price, 5 cents.

Bureau of Markets. No. 30. Pp. 9. Jan. 23, 1918. Price, 5 cents.

SOIL SURVEYS.

~~All~~ All requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

Soil Survey of the San Fernando Valley Area, California. By L. C. Holmes, E. C. Eckmann, and G. L. Harrington, of the U. S. Department of Agriculture, and J. E. Guernsey and C. J. Zinn, of the University of California. Pp. 61, pls. 4, figs. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

Soil Survey of Howard County, Maryland. By William T. Carter, Jr., of the U. S. Department of Agriculture, and J. P. D. Hull, of the Maryland Geological Survey. Pp. 34, fig. 1, map. (From F. O. Soils, 1916.) Price, 15 cents.

Soil Survey of Kimball County, Nebraska. By A. H. Meyer, J. O. Veatch, and B. W. Tillman, of the U. S. Department of Agriculture, and F. A. Hayes, H. C. Mortlock, and C. E. Collett, of the Nebraska Soil Survey. Pp. 28, fig. 1, map. (From F. O. Soils, 1916.) Price, 15 cents.

Soil Survey of Kay County, Oklahoma. By N. M. Kirk and R. C. Journey. Pp. 40, pl. 1, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

~~All~~ Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. (For sale only.) Vol. 45, No. 10. October, 1917. [Dec. 31, 1917.] Pp. 481-528, charts 9, figs. 13. Price, 25 cents per copy, \$2.50 per year. Payable to the Superintendent of Documents.

Special Articles: Atmospheric optical disturbances, Fall of 1911 to February, 1917. By C. Dorno.—Transparency of the atmosphere for ultra-violet radiation. By R. J. Strutt.—A. Brester's theory of the sun.—Lunar rainbow. By H. A. French.—Halos of October 3, 1917, in Texas and Ohio.—Notes on the climate of France and Belgium. By P. C. Day.—Fog along the California Coast. By A. H. Palmer.—Glaze, "Glazed Roads", "Ammil".—Great thunderstorm of Aug. 1, 1917, in Trinity County, Cal. By James Jones.—Heaviest rainfall in the British Isles.—Tropical hurricane of September 27-28, 1917, in southeastern Louisiana. By Ray A. Dyke.

National Weather and Crop Bulletin, No. 1, January, 1918; reporting temperature, rainfall, and crop conditions throughout the United States. Issued weekly, on Wednesday, April to October; monthly remainder of year. Price, 25 cents a year.

Snow and Ice Bulletins for January 2, 8, 15, 22, 29, 1918. These bulletins are issued weekly during the winter season, based upon data from regular Weather Bureau stations, supplemented by reports from selected cooperative observers. Price, 25 cents a year.

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United States Department of Agriculture,

WASHINGTON, D. C., February 28, 1918.

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Capons and Caponizing. By Rob R. Slocum, Animal Husbandry Division. Pp. 15, figs. 10. Contribution from the Bureau of Animal Industry. (**Farmers' Bulletin 849.**)

A revision of Farmers' Bulletin 452 and suitable for general distribution.

Surface Irrigation for Eastern Farms. By F. W. Stanley, Senior Irrigation Engineer. Pp. 36, figs. 21. Contribution from the Office of Public Roads and Rural Engineering. (**Farmers' Bulletin 899.**)

Suitable for general distribution in the eastern states.

Cattle Lice and How to Eradicate Them. By Marion Imes, Zoological Division. Pp. 27, figs. 14. Contribution from the Bureau of Animal Industry. (**Farmers' Bulletin 909.**)

For general distribution.

How to Attract Birds in the East Central States. By W. L. McAtee, Assistant Biologist. Pp. 15, figs. 11. Contribution from the Bureau of Biological Survey. (**Farmers' Bulletin 912.**)

For distribution in the states west of Pennsylvania, north of Tennessee, and east of the one-hundredth meridian.

Control of the Melon Aphis. By F. H. Chittenden, Entomologist in Charge of Truck Crop Insect Investigations. Pp. 16, figs. 8. Contribution from the Bureau of Entomology. (**Farmers' Bulletin 914.**)

A description of, and suggested methods of control of this insect which attacks cucumbers, melons, other cucurbits, cotton, oranges, etc.

How to Reduce Weevil Waste in Southern Corn. By C. H. Kyle, Assistant Physiologist, Office of Corn Investigations. Pp. 7, figs. 3. Contribution from the Bureau of Plant Industry. (**Farmers' Bulletin 915.**)

Of especial interest to corn growers in the southern states.

Parcel Post Business Methods. By C. C. Hawbaker and John W. Law, Assistants in Marketing by Parcel Post. Pp. 20. Contribution from the Bureau of Markets. (**Farmers' Bulletin 922.**)

This bulletin gives detailed suggestions regarding means of obtaining customers and methods of carrying on business, with samples of suitable letterheads, bills, order blanks, and other business forms.

A Simple Way to Increase Crop Yields: Methods Followed by Farmer of the Coastal Plain Section of the Central Atlantic States in Building Up Soil Fertility. By H. A. Miller, Agriculturist. Pp. 24, figs. 10. Contribution from the Office of Farm Management. (**Farmers' Bulletin 924.**)

Of interest to farmers in New Jersey, Maryland, Delaware, and Maryland especially.

Cabbage Diseases. By L. L. Harter, Pathologist, Office of Cotton, Truck, and Forage Crop Disease Investigations, and L. R. Jones, Collaborator of the Bureau of Plant Industry, and Plant Pathologist of the Wisconsin Agricultural Experiment Station. Pp. 30, figs. 13. Contribution from the Bureau of Plant Industry. (**Farmers' Bulletin 925.**)

A revision of Farmers' Bulletin 488 and suitable for general distribution.

Home Gardening in the South. By H. C. Thompson, Horticulturist, Office of Horticultural and Pomological Investigations. Pp. 44, figs. 20. Contribution from the Bureau of Plant Industry. (**Farmers' Bulletin 934.**)

Prepared especially for distribution in the southern states.

The City and Suburban Vegetable Garden. By H. M. Connolly, Assistant Horticulturist in Agricultural Education. Pp. 52, figs. 41. Contribution from the Bureau of Plant Industry and the States Relations Service. (**Farmers' Bulletin 936.**)

Intended to show the importance of gardening in city and suburban districts on small areas and back yards.

The Farm Garden in the North. By James H. Beattie, Scientific Assistant, Office of Horticultural and Pomological Investigations. Pp. 54, figs. 23. Contribution from the Bureau of Plant Industry. (**Farmers' Bulletin 937.**)

Gives plans for laying out a half-acre garden and suggests rotation of crops in same. Is intended principally for farmers and others having large areas suitable for gardening.

DEPARTMENTAL BULLETINS—TECHNICAL.

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A Study of Haymaking Crews and Labor Costs. By H. B. McClure, Agriculturist. Pp. 50, figs. 13. Contribution from the Office of Farm Management. Feb. 9, 1918. (**Department Bulletin 578.**) Price, 10 cents.

For general distribution among farmers in all sections.

Progress Reports of Experiments in Dust Prevention and Road Preservation, 1916. Pp. 78. Contribution from the Office of Public Roads and Rural Engineering. (Professional Paper.) Feb. 28, 1918. (**Department Bulletin 586.**) Price, 10 cents.

Of interest to road engineers and contractors.

A System of Accounting for Fruit Shipping Organizations. By G. A. Nahstoll and John R. Humphrey, Investigators in Market Business Practice. Pp. 60. Contribution from the Bureau of Markets. Feb. 27, 1918. (**Department Bulletin 590.**) Price, 10 cents.

This bulletin should be of interest to all fruit shipping organizations, and particularly to those operating under the procedure which now exists in the Pacific Northwest.

Geography of Wheat Prices. By L. B. Zapoleon, Division of Crop Records. Pp. 46, fig. 1, maps 7. Contribution from the Bureau of Crop Estimates. Feb. 21, 1918. (**Department Bulletin 594.**) Price, 20 cents.

A summary of conditions affecting farm prices of wheat in different parts of the United States.

Orchard Injury by the Hickory Tiger-Moth. By Dwight Isely, Scientific Assistant, Deciduous Fruit Insect Investigations. Pp. 16, pls. 3. Contribution from the Bureau of Entomology. (Professional Paper.) Feb. 4, 1918. (**Department Bulletin 598.**) Price, 5 cents.

Describes habits and life history of the insect, and suggests means for its control.

Lumber Used in the Manufacture of Wooden Products. By J. C. Nellis, Forest Examiner. Pp. 18, figs. 2. Contribution from the Forest Service. (Professional Paper.) Feb. 27, 1918. (**Department Bulletin 605.**) Price, 5 cents.

Presents statistics showing the average annual consumption of wood by the wood-working industries in the United States.

The Citrus Thrips. By J. R. Horton, Scientific Assistant. Pp. 42, pls. 3, figs. 10. Contribution from the Bureau of Entomology. (Professional Paper.) Feb. 14, 1918. (**Department Bulletin 616.**) Price, 10 cents.

A description of the damage done in California by thrips, and suggested methods of preventing same.

The Crow and Its Relation to Man. By E. R. Kalmbach, Assistant Biologist. Pp. 93, pls. 2, figs. 3. Contribution from the Bureau of Biological Survey. (Professional Paper.) Feb. 16, 1918. (**Department Bulletin 621.**) Price, 15 cents.

This bulletin discusses in detail the beneficial and harmful food habits of the crow; gives a general account of its life history and geographic distribution; and shows how it may be controlled where necessary. It is for general distribution.

Identification of Varieties of Barley. By Harry V. Harlan, Agronomist in Charge of Barley Investigations, Office of Cereal Investigations. Pp. 32, pls. 4. Contribution from the Bureau of Plant Industry. (Professional Paper.) Feb. 2, 1918. (**Department Bulletin 622.**) Price, 10 cents.

Of interest to experiment station workers and advanced studies in agronomy.

Cost of Harvesting Wheat by Different Methods. By Arnold P. Yerkes, Assistant Agriculturist, and L. M. Church, Assistant in Farm Accounting. Pp. 22, pls. 2. Contribution from the Office of Farm Management. Feb. 13, 1918. (**Department Bulletin 627.**) Price, 5 cents.

Of interest to farmers desiring to cut down harvesting expenses.

Wintering and Fattening Beef Cattle in North Carolina. By W. F. Ward, Animal Husbandry Division, Bureau of Animal Industry, and R. S. Curtis and F. T. Peden, of the North Carolina Agricultural Experiment Station. Pp. 53, figs. 7. Contribution from the Bureau of Animal Industry. Jan. 28, 1918. (**Department Bulletin 628.**) Price, 10 cents.

Of especial interest to farmers' and stock raisers in the mountainous parts of North and South Carolina, Tennessee, Virginia, West Virginia, and Kentucky.

Greenhouse Experiments on the Rust Resistance of Oat Varieties. By John H. Parker, formerly Scientific Assistant, Office of Cereal Investigations. Pp. 16, pls. 3, figs. 2. Contribution from the Bureau of Plant Industry. (Professional Paper.) Feb. 11, 1918. (**Department Bulletin 629.**) Price, 5 cents.

Presents results obtained in greenhouse culture work with crown rust and stem rust of oats.

Factors of Successful Farming Near Monett, Mo. By W. J. Spillman, Chief, Office of Farm Management. Pp. 28. Contribution from the Office of Farm Management. Feb. 25, 1918. (**Department Bulletin 633.**) Price, 5 cents.

An analysis of the business of 274 farms in southwestern Missouri.

The Market Milk Business of Detroit, Mich., in 1915. By Clarence E. Clement, Dairy Division, Bureau of Animal Industry, and Gustav P. Warber, Bureau of Markets. Pp. 28, pls. 3, figs. 11. Contribution from the Bureau of Animal Industry and the Bureau of Markets. Feb. 15, 1918. (**Department Bulletin 639.**) Price, 10 cents.

Should be of interest to milk dealers, city and state milk-inspection officials, consumers' leagues, producers' organizations, and students of the subject of market milk.

Lease Contracts Used in Renting Farms on Shares. A Study of the Distribution of Investments, Expenses, and Incomes, between Landlord and Tenant. By E. V. Wilcox, Agriculturist. Pp. 36. Contribution from the Office of Farm Management. Feb. 26, 1918. (**Department Bulletin 650.**) Price, 5 cents.

For distribution among farmers and tenants generally.

Lessons on Corn for Rural Elementary Schools. By C. H. Lane, Chief Specialist in Agricultural Education. Pp. 19, figs. 7. Contribution from the States Relations Service. (Professional Paper.) Feb. 12, 1918. (**Department Bulletin 653.**) Price, 5 cents.

A revision of Farmers' Bulletin 617, the original edition of which was issued Oct. 22, 1914. Furnishes elementary lessons on corn and is of interest to rural-school teachers in all parts of the United States.

MISCELLANEOUS.

The Distribution of Soft Wood Lumber in the Middle West. Wholesale Distribution. Studies of the Lumber Industry, Part VIII. By Ovid M. Butler, Assistant Director, Forest Products Laboratory. Pp. 96, figs. 25. Contribution from the Forest Service. (**Report No. 115, Office of the Secretary.**) Price, 20 cents.

The Agricultural Situation for 1918. Part 2. Dairying. Dairy Production Should be Maintained. Pp. 24, figs. 11. (**Circular 85, Office of the Secretary.**) Price, 5 cents.

Relates to the necessity of increased food production.

The Agricultural Situation for 1918. Part 4. Honey. More Honey Needed. Pp. 8. (**Circular 87, Office of the Secretary.**) Price, 5 cents.

Relates to the necessity for increased food production.

The Agricultural Situation for 1918. Part 5. Cotton. Maintaining the Supply of Cotton. Pp. 34. (**Circular 88, Office of the Secretary.**)

A statement showing the necessity for increased cotton production in 1918.

Regulations of the Secretary of Agriculture Under the United States Warehouse Act of August 11, 1916. Regulations for Cotton Warehouses. Pp. 43. Feb. 12, 1918. (**Circular 94, Office of the Secretary.**) Price, 5 cents.

The Sugar Supply of the United States: Its Extent and Distribution on August 31, 1917. Pp. 55, figs. 19. Contribution from the Bureau of Markets. Jan. 31, 1918. (**Circular 96, Office of the Secretary.**) Price, 5 cents.

Agricultural Production for 1918, with Special Reference to Spring Planting and to Live Stock. Pp. 22. Feb. 19, 1918. (**Circular 103, Office of the Secretary.**) Price, 5 cents.

Shows need of more effort for increased food production in 1918.

The Changa or West Indian Mole Cricket. By R. H. Van Zwaluwenburg, Entomologist. Pp. 28, pls. 3. Feb. 12, 1918. (**Bulletin 23, Porto Rico Agricultural Experiment Station.**) Price, 10 cents.

The Mango in Porto Rico. By C. F. Kinman, Horticulturist. Pp. 30, pls. 11. Feb. 4, 1918. (**Bulletin 24, Porto Rico Experiment Station.**) Price, 15 cents.

Review of the Grizzly and Big Brown Bears of North America, with Description of a New Genus, *Vetularctos.* By C. Hart Merriam, Consulting Biologist, Biological Survey. Pp. 136, pls. 16. Feb. 9, 1918. (**North American Fauna No. 41.**) Price, 35 cents.

SERIALS.

Journal of Agricultural Research. (For sale only.) Vol. 12, No. 5. Feb. 4, 1918. Contents: New-Place Effect in Maize. (lu G-134) By G. N. Collins.—Relation of the Variability of Yields of Fruit Trees to the Accuracy of Field Trials. (jw Cal.-14) By L. D. Batchelor and H. S. Reed.—Interrelations of Fruit-Fly Parasites in Hawaii. (jr K-60) By C. E. Pemberton and H. F. Willard. Pp. 231-296, pls. 4, figs. 11. Price, 20 cents.

Same, Vol. 12, No. 6. Feb. 11, 1918. Contents: Water Extractions of Soils as Criteria of their Crop-Producing Power. (lk Cal.-15) By John S. Burd.—Effect of Season and Crop Growth in Modifying the Soil Extract. (lx Cal.-16) By Guy R. Stewart.—The Freezing-Point Method as an Index of Variations in the Soil Solution Due to Season and Crop Growth. (ly Cal.-17) By D. R. Hoagland. Pp. 297-395, pl. 1, figs. 34. Price, 20 cents.

Same, Vol. 12, No. 7. Feb. 18, 1918. Contents: Efficacy of Some Anthelmintics. (iz A-34) By Maurice C. Hall and Winthrop D. Foster.—Tobacco Wildfire. (ma N. C.-9) By Frederick A. Wolf and A. C. Foster.—Gipsy-Moth Larvae as Agents in the Dissemination of the White-Pine Blister-Rust. (mb G-135) By G. Flippo Gravatt and G. B. Posey. Pp. 397-462, pls. 2, figs. 3. Price, 20 cents.

Same, Vol. 12, No. 8. Feb. 25, 1918. Contents: Influence of Carbonates of Magnesium and Calcium on Bacteria of Certain Wisconsin Soils. (me Wis.-11) By H. L. Fulmer.—Humus in Mulched Basins, Relation of Humus Content to Orange Production, and Effect of Mulches on Orange Production. (md G-136) By Charles A. Jensen.—Relation of Kinds and Varieties of Grain to Hessian-Fly Injury. (mc Kans.-11) By James W. McColloch and S. C. Salmon. Pp. 463-527, figs. 11. Price, 15 cents.

The Monthly Crop Report. Vol. 4, No. 2. February, 1918. Pp. 9-20. (Bureau of Crop Estimates.)

Contains data relating to agriculture, including estimates of acreage, conditions, yields, prices, and value of crops and live stock. For free distribution.

SOIL SURVEYS.

All requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

Soil Survey of Meriwether County, Georgia. By Mark Baldwin and J. A. Kerr. Pp. 31, pls. 3, fig. 1, map. (From *F. O. Soils, 1916*.) Price, 15 cents.

Soil Survey of Richmond County, Georgia. By T. M. Bushnell and J. M. Snyder. Pp. 38, fig. 1, map. (From *F. O. Soils, 1916*.) Price, 15 cents.

SEPARATES.

Fertilizers from Industrial Wastes. By Wm. H. Ross. Bureau of Soils. Pp. 13. (Separate 728, Yearbook 1917.) Price, 5 cents.

The World's Supply of Wheat. By O. C. Stine, Office of Farm Management. Pp. 22, figs. 3. (Separate 752, Yearbook 1917.) Price, 5 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. (For sale only.) Vol. 45, No. 11, November, 1917. [Jan. 31, 1918.] Pp. 529-571, charts 9, figs. 11. Price, 25 cents per copy, \$2.50 per year. Payable to the Superintendent of Documents.

Special Articles: Solar and sky radiation during November, 1917. By H. H. Kimball.—Observations of the neutral points of atmospheric polarization, from great heights. By A. Wigand.—Relation between sunlight and moonlight. By J. S. Dow.—Why the axes of the planets are inclined. By W. H. Pickering.—Shall we revise our nomenclature of thermometric scales? By C. F. Marvin.—Sunspots, magnetic storms, and rainfall. By H. Arctowski.—Local wind of the foehn type near San Francisco Bay. By B. M. Varney.—Nebraska hailstorm of Aug. 8, 1917. By G. A. Loveland.—Arithmetic mean and the "middle" value of certain meteorological observations. By L. Becker.—New Zealand Standard Time.

National Weather and Crop Bulletin. No. 2, February, 1918, reporting temperature, rainfall, and crop conditions throughout the United States. Issued weekly, on Wednesday, April to October; monthly remainder of year. Price, 25 cents a year.

Snow and Ice Bulletins for February 5, 12, 19, 26, 1918. These bulletins are issued weekly during the winter season, based upon data from regular Weather Bureau stations, supplemented by reports from selected cooperative observers. Price, 25 cents a year.

Jos. A. ARNOLD,
Chief, Division of Publications.

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This circular will be sent regularly to all who apply for it.

United States Department of Agriculture,

WASHINGTON, D. C., March 30, 1918.

MONTHLY LIST OF PUBLICATIONS.

[MARCH, 1918.]

READ CAREFULLY BEFORE ORDERING.

~~AS~~ Send no remittances to the U. S. Department of Agriculture.

A copy of any of the publications listed herein, except those otherwise noted, may be obtained free upon application to the Chief of the Division of Publications, United States Department of Agriculture, Washington, D. C., as long as the department's supply lasts.

After this department's supply is exhausted, publications can still be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., but by purchase only, and at the prices noted herein.

~~AS~~ Send all remittances to the Superintendent of Documents direct. His office is not a part of the Department of Agriculture.

FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

~~AS~~ NOTE.—The department's supply of the current numbers of Farmers' Bulletin is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy.

Information for Fruit Growers about Insecticides, Spraying Apparatus, and Important Insect Pests. By A. L. Quaintance, Entomologist in Charge of Deciduous Fruit Insect Investigations, and E. H. Siegler, Entomological Assistant. Pp. 99, figs. 74. Contribution from the Bureau of Entomology. (**Farmers' Bulletin 908.**) Price, 15 cents.

Gives directions for the preparation and use of the more important insecticides necessary in combating the various insect pests of orchards, vineyards, etc., as well as other information of use in preventing or reducing insect losses to these crops.

Milk Goats. By Edward L. Shaw, Animal Husbandry Division. Pp. 36, figs. 17. Contribution from the Bureau of Animal Industry. (**Farmers' Bulletin 920.**) Suitable for general distribution.

Farm Home Conveniences. By Madge J. Reese, Assistant in Home Demonstration Work, Office of Extension Work South. Pp. 32, figs. 24. Contribution from the States Relations Service. (**Farmers' Bulletin 927.**) For general distribution.

The Sheep Killing Dog. By J. F. Wilson, Animal Husbandry Division. Pp. 32, figs. 2. Contribution from the Bureau of Animal Industry. (**Farmers' Bulletin 935.**)

Supersedes Farmers' Bulletin 652. Contains a digest of existing State dog laws, and is for general distribution.

Care and Repair of Farm Implements, No. 3. Plows and Harrows. By E. B. McCormick, Chief Division of Rural Engineering, and L. L. Beebe, Assistant Mechanical Engineer. Pp. 10, fig. 1. Contribution from the Office of Public Roads and Rural Engineering. (**Farmers' Bulletin 946.**)

For general distribution.

Care and Repair of Farm Implements, No. 4. Mowers, Reapers, and Binders. By E. B. McCormick, Chief, Division of Rural Engineering, and L. L. Beebe, Assistant Mechanical Engineer. Pp. 15, figs. 8. Contribution from the Office of Public Roads and Rural Engineering. (**Farmers' Bulletin 947.**)
For general distribution.

The Rag-Doll Seed Tester. Its Use in Determining What Ears of Corn are Fit for Seed. By George J. Burt, H. Howard Biggar, and Clement E. Trout, Scientific Assistants, Office of Corn Investigations. Pp. 7, figs. 5. Contribution from the Bureau of Plant Industry. (**Farmers' Bulletin 948.**)
For general distribution.

Use of Wheat Flour Substitutes in Baking. By Hannah L. Wessling, Specialist in Home Demonstration Work. Pp. 22. Contribution from the States Relation Service. (**Farmers' Bulletin 955.**)
Suitable for general distribution.

DEPARTMENTAL BULLETINS—TECHNICAL.

The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information, as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

Report on Experimental Convict Road Camp, Fulton County, Ga. By H. S. Fairbank and R. H. Eastham, Highway Engineers, and W. F. Draper, Passed Assistant Surgeon, U. S. Public Health Service. Pp. 64, pls. 9, figs. 9. Contribution from the Office of Public Roads and Rural Engineering. Mar. 7, 1918. (**Department Bulletin 583.**) Price, 25 cents.

Describes a model convict road camp, and methods of organization and discipline with a summary of the results obtained thereby.

The Striped Peach Worm. By H. C. Ingerson, Scientific Assistant, Deciduous Fruit Insect Investigations. Pp. 16, pls. 4. Contribution from the Bureau of Entomology. (Professional Paper.) Mar. 16, 1918. (**Department Bulletin 599.**) Price, 5 cents.

Describes life history and habits of this worm and suggests methods for its control.

Value of a Small Plot of Ground to the Laboring Man. A study of the Food Raised by Operatives in Southern Cotton-Mill Towns. By W. C. Funk, Scientific Assistant. Pp. 12, pls. 3, fig. 1. Contribution from the Office of Farm Management. Mar. 5, 1918. (**Department Bulletin 602.**) Price, 5 cents.
For general distribution.

Incense Cedar. By J. Alfred Mitchell, Forest Examiner. Pp. 40, pls. 5, figs. 4. Contribution from the Forest Service. (Professional Paper.) Mar. 16, 1918. (**Department Bulletin 604.**) Price 10 cents.

Describes products and uses of this wood and is of interest to lumbermen generally.

Varieties of Cheese: Descriptions and Analyses. By C. F. Doane Dairy Division, and H. W. Lawson, formerly of the Office of Experiment Stations. Pp. 80. Contribution from the Bureau of Animal Industry. Mar. 6, 1918. (**Department Bulletin 608.**) Price, 10 cents.

A revision of Bureau of Animal Industry Bulletin 146 and of interest to dealers in and manufacturers of cheese.

Food Habits of the Swallows, a Family of Valuable Native Birds. By F. E. L. Beal, Assistant Biologist. Pp. 28, pls. 2. Contribution from the Bureau of Biological Survey. (Professional Paper.) Mar. 8, 1918. (**Department Bulletin 619.**) Price, 5 cents.

This bulletin is a technical study of the food habits of the seven North American forms of the swallow family, and is for distribution in all sections of the United States.

Effect of Varying Certain Cooking Conditions in the Production of Sulphite Pulp from Spruce. By S. E. Lunak, Chemist in Forest Products. Pp. 24, pls. 12, figs. 10. Contribution from the Forest Service. (Professional Paper.) Mar. 14, 1918. (**Department Bulletin 620.**) Price, 15 cents.
Of interest to paper manufacturers generally.

Farm Practice in the Production of Hay in Steuben County, N. Y., and Washington County, Pa. By H. B. McClure, Agriculturist. Pp. 16, figs. 3. Contribution from the Office of Farm Management. Mar. 4, 1918. (**Department Bulletin 641.**) Price, 5 cents.

A detailed study of the amount of labor required per acre and per ton for each operation, and the machinery charges per acre and per ton.

The Melon Fly. By E. A. Back, Entomologist and C. E. Pemberton, Assistant Entomologist, Mediterranean and Other Fruit Fly Investigations. Pp. 32, figs. 23. Contribution from the Bureau of Entomology. Mar. 8, 1918. (**Department Bulletin 643.**) Price, 10 cents.

Describes life history and habits of this insect, and suggests measures for its control.

MISCELLANEOUS.

The Distribution of Softwood Lumber in the Middle West. Retail Distribution. Studies of the Lumber Industry, Part IX. By Ovid M. Butler, Assistant Director, Forest Products Laboratory. Pp. 100, figs. 25. Contribution from the Forest Service. (**Report 116, Office of the Secretary.**) Price, 15 cents.

Report of the Hawaii Agricultural Experiment Station. 1917. Pp. 56, pls. 8, fig. 1. Mar. 5, 1918. Price, 10 cents.

SERIALS.

Journal of Agricultural Research. (For sale only.) Vol. 12, No. 9, Mar. 4, 1918. Contents: Wilt Diseases of Okra and the Verticillium-Wilt Problem. (1j G-137) By C. W. Carpenter.—Winter Cycle of Egg Production in the Rhode Island Red Breed of Domestic Fowl. (mf Mass-3) By H. D. Goodale.—Digestion of Starch by the Young Calf. (mg A-35) By R. H. Shaw, T. E. Woodward, and R. P. Norton.—Toxicity of Volatile Organic Compounds to Insect Eggs. (mh Minn-24) By William Moore and Samuel A. Graham.—Corn-Stover Silage. (mi Pa-5) By J. M. Sherman and S. I. Bechdel.—Weevils Which Affect the Irish Potato, Sweet Potato, and Yam. (ms K-61) By W. Dwight Pierce. Pp. 529-611, pls. 19, fig. 1. Price, 65 cents.

Same. Vol. 12, No. 10, Mar. 11, 1918. Contents: Sterility in the Strawberry. (mj Minn.-25) By W. D. Valleau.—Effect of Nitrifying Bacteria on the Solubility of Tricalcium Phosphate. (mk Cal-18) By W. P. Kelley. Pp. 613-683, pls. 6, figs. 4. Price, 30 cents.

Same. Vol. 12, No. 11, Mar. 18, 1918. Contents: Respiration of Stored Wheat. (mm Minn.-26) By C. H. Bailey and A. M. Gurjar.—Effects of Mistletoe on Young Conifers. (ml G-138) By James R. Weir.—Determination of Fatty Acids in Butter Fat. (mn Mass. 4) By E. B. Holland and J. P. Buckley, Jr. Pp. 685-732, pl. 1, figs. 9. Price, 25 cents.

~~Note~~.—Beginning with volume 5 the Journal of Agricultural Research has been issued weekly and is distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. *It will not be sent free to individuals.* The Superintendent of Documents will receive subscriptions for this publication, the price being \$3 per year, 52 numbers.

Experiment Station Record. Vol. 37, No. 9, Abstract Number. Feb. 28, 1918. E. W. Allen, Ph. D., Editor. Pp. 801-900. Price, 15 cents.

~~Note~~.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, 10 numbers each, at \$1 a volume.

The Monthly Crop Report. Vol. 4, No. 3, Mar., 1918. Pp. 21-32 (Bureau of Crop Estimates.)

Contains data relating to agriculture, including estimates of acreage, conditions, yield, prices, and value of crops and live stock. For free distribution.

SERVICE AND REGULATORY ANNOUNCEMENTS—FOR SALE ONLY.

~~Note~~. These contain *only* information, instructions, and notices governing the enforcement of food and drugs act, meat inspection, 28-hour, and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. *Free distribution* is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale *only*, at prices noted.

Bureau of Animal Industry. No. 128. December, 1918. Pp. 129-142. Feb. 9, 1918. Price, 5 cents.

Bureau of Biological Survey. No. 18. P. 1. Mar. 26, 1918. Price, 5 cents.

Bureau of Chemistry. Supplement No. 37. [N. J. 5301-5350] Pp. 345-397. Feb. 23, 1918. Price, 5 cents.

SOIL SURVEYS.

~~Note~~. All requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

Soil Survey of Wilcox County, Alabama. By R. A. Winston, of the U. S. Department of Agriculture, and N. Eric Bell, of the Alabama Department of Agriculture and Industries. Pp. 71, fig. 1, map. (**From F. O. Soils, 1916.**) Price, 15 cents.

Soil Survey of Hempstead County, Arkansas. By Arthur E. Taylor and W. B. Cobb. Pp. 53, fig. 1, map. (**From F. O. Soils, 1916.**) Price, 15 cents.

Soil Survey of Hinds County, Mississippi. By A. E. Kocher, and A. L. Goodman. Pp. 42, pls. 3, fig. 1, map. (**From F. O. Soils, 1916.**) Price, 15 cents.

Soil Survey of Lee County, Mississippi. By W. E. Tharp, of the U. S. Department of Agriculture, and E. M. Jones, of the Mississippi Geological Survey. Pp. 40, fig. 1, map. (**From F. O. Soils, 1916.**) Price, 15 cents.

Soil Survey of Fillmore County, Nebraska. By A. H. Meyer, of the U. S. Department of Agriculture, and C. E. Collett and N. A. Bengtson, of the Nebraska Soil Survey. Pp. 24, pl. 1, fig. 1, map. (**From F. O. Soils, 1916.**) Price, 15 cents.

SEPARATES.

Cooperative Campaigns for the Control of Ground Squirrels, Prairie-Dogs, and Jack Rabbits. By W. B. Bell, Bureau of Biological Survey. Pp. 11, pls. 3. (**Separate 724, Yearbook 1917.**) Price, 5 cents.

Rest Rooms for Women in Marketing Centers. By Anne M. Evans, Bureau of Markets. Pp. 10, pl. 1. (**Separate 726, Yearbook, 1917.**) Price, 5 cents.

The Weed Problem in American Agriculture. By H. R. Cates, Bureau of Plant Industry. Pp. 13, pls. 5. (**Separate 732, Yearbook 1917.**) Price, 5 cents.

Value of Records to the Farmer. By J. S. Ball, Office of Farm Management. Pp. 17, fig. 1. (**Separate 735, Yearbook 1917.**) Price, 5 cents.

Cooperative Marketing, Where? When? How? By C. E. Bassett, and O. B. Jesness, Bureau of Markets. Pp. 11. (**Separate 738, Yearbook 1917.**) Price, 5 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. (For sale only.) Vol. 45, No. 12, December, 1917.
 [Mar. 1918.] Pp. 573-636, charts 11, figs. 10. Price, 25 cents per copy, \$2.50 per year. Payable to the Superintendent of Documents.

Special Articles: Solar and sky radiation during December, 1917. By H. H. Kimball.—Lunar total eclipse, 1917, July 4. By L. Picard.—Permanent periodicity in sunspots. By J. Larmor.—Polarization of skylight. By A. Gockel.—Solar coronæ: Five years recent observation. By J. Maurer.—Need of geophysical observing stations. By P. Gruner.—Settlement of tropical Australia. By Griffith Taylor.—Practical hints in forecasting minimum temperatures. By Wm. G. Reed.—Meteorology and war flying. By R. DeC. Ward.—Nitrites from nitrates by sunlight. By B. Moore.—Times Zones at sea.

National Weather and Crop Bulletin. No. 3, March, 1918, reporting temperature, rainfall, and crop conditions throughout the United States. Issued Weekly, on Wednesday, April to October; monthly remainder of year. Price, 25 cents a year.

Snow and Ice Bulletins for March 5, 12, 19, 26, 1918. These bulletins are issued weekly during the winter season, based upon data from regular Weather Bureau stations, supplemented by reports from selected cooperative observers. Price, 25 cents a year.

FRANCIS J. P. CLEARY,
Acting Chief, Division of Publications.

FOOD LEAFLETS.

THE Department has published a series of pamphlets dealing with food saving and containing latest information for the economic use of various foods and the making of desirable left-overs. These circulars contain many practical recipes which should be of direct interest to the housewife who wishes to help, through her household, in the national efforts to insure an adequate food supply. They will be sent in answer to individual requests, and are especially suitable for distribution by those in charge of the many local organizations engaged in the food-conservation campaign, and such officials are urged to write at once to the Department for a supply to distribute in their localities. Ask for United States Food Leaflets.

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This circular will be sent regularly to all who apply for it.

United States Department of Agriculture,

WASHINGTON, D. C., April 30, 1918.

MONTHLY LIST OF PUBLICATIONS.

[APRIL, 1918.]

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FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

Note.—The department's supply of the current numbers of Farmers' Bulletins is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy.

Growing Peaches: Sites and Cultural Methods. By H. P. Gould, Pomologist, Office of Horticultural and Pomological Investigations. Pp. 44, figs. 27. Contribution from the Bureau of Plant Industry. (**Farmers' Bulletin 917.**) Price, 10 cents.

A revision and combination of Farmers' Bulletins 631 and 632 and suitable for general distribution.

The Principles of the Liming of Soils. By Edmund C. Shorey, Scientist in Charge of Chemical Investigations. Pp. 30, figs. 5. Contribution from the Bureau of Soils. (**Farmers' Bulletin 921.**) For general distribution.

Some Common Disinfectants. By M. Dorset, Chief of the Biochemic Division. Pp. 12. Contribution from the Bureau of Animal Industry. (**Farmers' Bulletin 926.**) A revision of Farmers' Bulletin 345 and suitable for general distribution.

Control of the Argentine Ant in Orange Groves. By J. R. Horton, Scientific Assistant, Tropical and Subtropical Fruit Insect Investigations. Pp. 20, figs. 6. Contribution from the Bureau of Entomology. (**Farmers' Bulletin 928.**) Of interest to citrus fruit growers generally.

The Place of Sheep on New England Farms. By F. H. Branch, Assistant Agriculturist. Pp. 30, figs. 6. Contribution from the Office of Farm Management. (**Farmers' Bulletin 929.**) Describes the present status of this industry in the New England States and the probable profits therefrom.

Spraying for the Control of Insects and Mites Attacking Citrus Trees in Florida. By W. W. Yothers, Entomological Assistant, Tropical and Subtropical Fruit Insect Investigations. Pp. 39, figs. 24. Contribution from the Bureau of Entomology. (**Farmers' Bulletin 933.**) Gives information regarding the best equipment for Florida conditions, and directions for preparing effective homemade insecticides.

Apple Bitter-Rot and Its Control. By John W. Roberts, Pathologist, and Leslie Pierce, Assistant, Fruit-Disease Investigations. Pp. 14, figs. 3. Contribution from the Bureau of Plant Industry. (**Farmers' Bulletin 938.**)
For general distribution.

Cereal Smuts and the Disinfection of Seed Grain. By Harry B. Humphrey, Pathologist in Charge of Cereal-Disease Investigations, and Alden A. Potter, Assistant Cereal Pathologist. Pp. 28, figs. 15. Contribution from the Bureau of Plant Industry. (**Farmers' Bulletin 939.**)
For general distribution.

Controlling the Clover-Flower Midge in the Pacific Northwest. By C. W. Creel and L. P. Rockwood, Scientific Assistants, Cereal and Forage Insect Investigations. Pp. 12, figs. 6. Contribution from the Bureau of Entomology. (**Farmers' Bulletin 942.**)
For distribution throughout the section named.

Haymaking. By H. B. McClure, Agriculturist. Pp. 31, figs. 16. Contribution from the Office of Farm Management. (**Farmers' Bulletin 943.**)
For general distribution.

DEPARTMENTAL BULLETINS—TECHNICAL.

The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information, as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

Some Biological and Control Studies of *Gastrophilus Haemorrhoidalis* and Other Bots of Horses. By W. E. Dove, Scientific Assistant, Insects Affecting Domestic Animals. Pp. 52, pls. 5, figs. 4. Contribution from the Bureau of Entomology. (Professional Paper.) Apr. 9, 1918. (**Department Bulletin 597.**) Price, 10 cents.

Describes the life history and habits of this insect and suggests control measures.

A Study of Share-Rented Dairy Farms in Green County, Wisconsin, and Kane County, Illinois. By E. A. Boeger, Agriculturist. Pp. 15. Contribution from the Office of Farm Management. (Professional Paper.) Apr. 10, 1918. (**Department Bulletin 603.**) Price, 5 cents.
Of interest to landlords and tenants on share-rented dairy farms.

Relative Resistance of Various Hardwoods to Injection with Creosote. By Clyde H. Teesdale, in charge, Section of Wood Preservation, and J. D. MacLean, Assistant Engineer in Forest Products. Pp. 36, pls. 12, figs. 15. Contribution from the Forest Service. (Professional Paper.) Apr. 15, 1918. (**Department Bulletin 606.**) Price, 15 cents.
A technical description of results of experiments in injecting creosotes in various species of hardwoods.

Cost of Producing Apples in Yakima Valley, Washington. By G. H. Miller, Assistant Agriculturist, and S. M. Thomson, Scientific Assistant. Pp. 75, pls. 5, figs. 14. Contribution from the Office of Farm Management. Apr. 20, 1918. (**Department Bulletin 614.**) Price, 15 cents.
A detailed study of the current cost factors involved in the maintenance of orchards and the handling of the crop on 120 representative bearing orchards.

Experiments with Durum Wheat. By Carleton R. Ball, Agronomist in Charge, and J. Allen Clark, Scientific Assistant, Western Wheat Investigations, Office of Cereal Investigations. Pp. 64, figs. 13. Contribution from the Bureau of Plant Industry. (Professional Paper.) Mar. 13, 1918. (**Department Bulletin 618.**) Price, 10 cents.
Of interest to all growers of Durum wheat.

Cropping Systems for the Moister Portion of Eastern Washington and Oregon and Northern Idaho. By Lee W. Fluharty, Assistant Agriculturist. Pp. 12. Contribution from the Office of Farm Management. Apr. 8, 1918. (**Department Bulletin 625.**) Price, 5 cents.
Of interest to farmers in the sections noted.

Studies on the Digestibility of Some Nut Oils. By A. D. Holmes, Specialist in Charge of Digestion Experiments, Office of Home Economics. Pp. 19. Contribution from the States Relations Service. (Professional Paper.) Apr. 16, 1918. (**Department Bulletin 630.**) Price, 5 cents.
A study of the digestibility of almond, black-walnut, Brazil-nut, butter-nut, hickory-nut, English-walnut, and pecan oils. Of interest to students and investigators of food problems.

A Physical and Chemical Study of the Kafir Kernel. By George L. Bidwell, Chemist in Charge, Cattle Food and Grain Investigation Laboratory. Pp. 6, fig. 1. Contribution from the Bureau of Chemistry. (Professional Paper.) Apr. 4, 1918. (**Department Bulletin 634.**) Price, 5 cents.
A study showing that, if properly handled, kafir products might be substituted for corresponding corn products.

The Commercial Freezing and Storing of Fish. By Ernest D. Clark and Lloyd H. Almy, Food Research Laboratory. Pp. 10, pls. 4. Contribution from the Bureau of Chemistry. Mar. 9, 1918. (**Department Bulletin 635.**) Price, 5 cents.
A description of the various methods used in the commercial freezing and storing of fish.

Forestry and Community Development. By Samuel T. Dana, Assistant Chief of Forest Investigations. Pp. 35, pls. 8. Contribution from the Forest Service. Apr. 8, 1918. (**Department Bulletin 638.**) Price, 10 cents.

Relates to the destruction of our forests on the development of other resources of the country.

The Mediterranean Fruit Fly. By E. A. Back, Entomologist, and C. E. Pemberton, Assistant Entomologist, Mediterranean and Other Fruit Fly Investigations. Pp. 44, figs. 33. Contribution from the Bureau of Entomology. Apr. 8, 1918. (**Department Bulletin 640.**) Price, 15 cents.

A statement of the distribution, life history, and habits of this insect, with suggestions for its control.

Lessons on Pork Production for Elementary Rural Schools. By E. A. Miller, Specialist in Agricultural Education. Pp. 25, figs. 15. Contribution from the States Relations Service. (Professional Paper.) Apr. 6, 1918. (**Department Bulletin 646.**) Price, 5 cents.

This bulletin is intended for the use of teachers of elementary agriculture.

Experiments on the Digestibility of Fish. By A. D. Holmes, Specialist in Charge of Digestion Experiments, Office of Home Economics. Pp. 15. Contribution from the States Relations Service. (Professional Paper.) Apr. 13, 1918. (**Department Bulletin 649.**) Price, 5 cents.

This bulletin records studies of the digestibility of Boston mackerel, butterfish, grayfish, and salmon, and is primarily of interest to students and investigators of food problems.

Influence on Linseed Oil of the Geographical Source and Variety of Flax. By Frank Rabak, Chemical Biologist, Office of Drug-Plant and Poisonous-Plant Investigations. Pp. 16. Contribution from the Bureau of Plant Industry. (Professional Paper.) Apr. 20, 1918. (**Department Bulletin 655.**) Price, 5 cents.

Of interest to manufacturers of paints and varnishes.

The Manufacture of Casein from Buttermilk or Skim Milk. By Arnold O. Dahlberg, of the Dairy Division. Pp. 32, figs. 9. Contribution from the Bureau of Animal Industry. Apr. 9, 1918. (**Department Bulletin 661.**) Price, 5 cents.

Describes the method of manufacture of casein and is of interest to owners of creameries generally.

Production of Lumber, Lath, and Shingles in 1916. By Franklin H. Smith and Albert H. Pierson, Statisticians in Forest Products. Pp. 43, fig. 1. Contribution from the Forest Service. (Professional Paper.) Apr. 19, 1918. (**Department Bulletin 673.**) Price, 5 cents.

Of interest to lumbermen and builders generally.

MISCELLANEOUS.

Report of the Alaska Agricultural Experiment Station, 1916. Pp. 91, pls. 13. Apr. 16, 1918. Price, 20 cents.

The Work of the Scottsbluff Reclamation Project Experiment Farm in 1916. By Fritz Knorr, Farm Superintendent. Pp. 18. Mar. 12, 1918. (**W. A. I. 18, Bureau of Plant Industry.**) Price, 5 cents.

Errors in the Weight of Print Butter. Their Causes and Prevention. By H. Runkel, Assistant Chemist, Bureau of Chemistry, and H. M. Roeser, Assistant Physicist, Bureau of Standards, Department of Commerce. Pp. 15, figs. 7. Contribution from the Bureau of Chemistry. (**Circular 95, Office of the Secretary.**) Price, 5 cents.

Use Peanut Flour to Save Wheat. Pp. 4. Contribution from the States Relations Service. Apr. 15, 1918. (**Circular 110, Office of the Secretary.**) Contains recipes showing various ways of using peanut flour.

The Farm Labor Problem. Man-Power Sufficient if Properly Mobilized by Cooperation and Community Action. By Clarence Ousley, Assistant Secretary of Agriculture. Pp. 10. (**Circular 112, Office of the Secretary.**)

SERIALS.

Journal of Agricultural Research. (For sale only.) Vol. 13, No. 1, Apr. 1, 1918. Contents: Studies on Capacities of Soils for Irrigation Water, and on a New Method of Determining Volume Weight. (mo Cal. 19) By O. W. Israelsen.—Some Stoneflies Injurious to Vegetation. (mq K-62) By E. J. Newcomer.—Basal Katabolism of Cattle and Other Species. (mp Pa-6) By Henry Prentiss Armsby, J. August Fries, and Winfred Waite Braman.—Further Notes on the Oriental Peach Moth, Laspeyresia molesta. (na K 63) By W. B. Wood and E. R. Selkregg. Pp. 1-72, pls. 10, figs. 22. Price, 30 cents.

Same, Vol. 13, No. 3, Apr. 15, 1918. Contents: Overwintering of the House Fly. (my K-64) By R. H. Hutchison.—Soil Acidity as Influenced by Green Manures. (mx Pa-7) By J. W. White.—A Leafblight of Kalmia latifolia. (nb G-141) By Ella M. A. Enlows. Pp. 149-212, pls. 5, figs. 2. Price, 20 cents.

Experiment Station Record. Vol. 38, No. 1. January, 1918. E. W. Allen, Ph. D., Editor. Pp. 1-100. Price, 15 cents.

Same, Vol. 38, No. 2. February, 1918. Pp. 101-200. Price, 15 cents.

NOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, 10 numbers each, at \$1 a volume.

The Monthly Crop Report. Vol. 4, No. 4, April, 1918. Pp. 33-44. (Bureau of Crop Estimates.)

Contains data relating to agriculture, including estimates of acreage, conditions, yields, prices, and value of crops and live stock. For free distribution.

SOIL SURVEYS.

All requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

Soil Survey of Brooks County, Georgia. By A. T. Sweet and B. W. Tillman. Pp. 42, pls. 5, fig. 1, map. (**From F. O. Soils, 1916.**) Price, 15 cents.

Soil Survey of Eastland County, Texas. By William G. Smith, J. H. Agee, W. L. Watkins, and W. A. Rockie. Pp. 37, fig. 1, map. (**From F. O. Soils, 1916.**) Price, 15 cents.

SEPARATES.

The Great Plains Waterfowl Breeding Grounds and Their Protection. By Harry C. Oberholser, Biological Survey. Pp. 10, pls. 2. (**Separate 723, Yearbook 1917.**) Price, 5 cents.

The House Rat, the Most Destructive Animal in the World. By David E. Lantz, Bureau of Biological Survey. Pp. 19, pls. 4. (**Separate 725, Yearbook 1917.**) Price, 5 cents.

The Design of Public Roads. By Charles H. Moorefield, Office of Public Roads and Rural Engineering. Pp. 19, figs. 4. (**Separate 727, Yearbook 1917.**) Price, 5 cents.

The Sources of Our Nitrogenous Fertilizers. By Frederick W. Brown, Bureau of Soils. Pp. 10. (**Separate 729, Yearbook 1917.**) Price, 5 cents.

Phosphate Rock Our Greatest Fertilizer Asset. By William H. Wagaman, Bureau of Soils. Pp. 9. (**Separate 730, Yearbook 1917.**) Price, 5 cents.

Danger of Introducing Fruit Flies in the United States. By E. A. Back, Bureau of Entomology. Pp. 14, pls. 8. (**Separate 731, Yearbook 1917.**) Price, 5 cents.

Conservation of Fertilizer Materials from Minor Sources. By C. C. Fletcher, Bureau of Soils. Pp. 8. (**Separate 733, Yearbook 1917.**) Price, 5 cents.

Production of Drug-Plant Crops in the United States. By W. W. Stockberger, Bureau of Plant Industry. Pp. 10, pls. 4. (**Separate 734, Yearbook 1917.**) Price, 5 cents.

Teamwork Between the Farmer and His Agent. By C. E. Bassett, Bureau of Markets. Pp. 7. (**Separate 736, Yearbook 1917.**) Price, 5 cents.

Butterfat and Income. By J. C. McDowell, Bureau of Animal Industry. Pp. 8, figs. 2. (**Separate 743, Yearbook 1917.**) Price, 5 cents.

How the Dairy Cow Brought Prosperity in the Wake of the Boll Weevil. By L. A. Higgins, Bureau of Animal Industry. Pp. 10, pls. 2. (**Separate 744, Yearbook 1917.**) Price, 5 cents.

The Service of Cold Storage in the Conservation of Foodstuffs. By I. C. Franklin, Bureau of Markets. Pp. 11, fig. 1. (**Separate 745, Yearbook 1917.**) Price, 5 cents.

A Wasted Sugar Supply. By E. F. Phillips, Bureau of Entomology. Pp. 8, pls. 2. (**Separate 747, Yearbook 1917.**) Price, 5 cents.

Present Status of the Peanut Industry. By H. C. Thompson, Bureau of Plant Industry. Pp. 16, pls. 3. (**Separate 748, Yearbook 1917.**) Price, 5 cents.

Wool: Production, Foreign Trade, Supply, and Consumption. By George K. Holmes, Bureau of Crop Estimates. Pp. 26. (**Separate 751, Yearbook 1917.**) Price, 5 cents.

Sugar Supply of the United States. By Frank Andrews, Bureau of Crop Estimates. Pp. 16. (**Separate 756, Yearbook, 1917.**) Price, 5 cents.

Statistics of Grain Crops, 1917. Pp. 50. (**Separate 759, Yearbook 1917.**) Price, — cents.

PUBLICATIONS OF THE WEATHER BUREAU.

All publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

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United States Department of Agriculture,

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FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

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Peach Varieties and their Classification. By H. P. Gould, Pomologist, Office of Horticultural and Pomological Investigations. Pp. 15. Contribution from the Bureau of Plant Industry. (**Farmers' Bulletin 918.**)

A revision of Farmers' Bulletin 633, and suitable for general distribution.

Fumigation of Citrus Trees. By R. S. Woglum, Entomological Assistant, Tropical and Subtropical Fruit Insect Investigations. Pp. 31, figs. 17. Contribution from the Bureau of Entomology. (**Farmers' Bulletin 923.**)

Marketing Butter and Cheese by Parcel Post. By Lewis B. Flohr, Investigator in Marketing, and Roy C. Potts, Specialist in Marketing Dairy Products. Pp. 12, figs. 6. Contribution from the Bureau of Markets. (**Farmers' Bulletin 930.**)

Common White Grubs. By John J. Davis, Entomological Assistant, Cereal and Forage Insect Investigations. Pp. 28, figs. 21. Contribution from the Bureau of Entomology. (**Farmers' Bulletin 940.**)

A revision of Farmers' Bulletin 543, and suitable for general distribution.

Dehorning and Castrating Cattle. By Frank W. Farley, Animal Husbandry Division. Pp. 14, figs. 12. Contribution from the Bureau of Animal Industry. (**Farmers' Bulletin 949.**)

The Southern Corn Rootworm and Farm Practices to Control it. By Philip Luginbill, Entomological Assistant Cereal and Forage Insect Investigations. Pp. 12, figs. 7. Contribution from the Bureau of Entomology. (**Farmers' Bulletin 950.**)

The Disinfection of Stables. By George W. Pope, Assistant Chief of the Quarantine Division. Pp. 12, figs. 6. Contribution from the Bureau of Animal Industry. (**Farmers' Bulletin 954.**)

A revision of Farmers' Bulletin 480, and for general distribution.

A Simple Hog-Breeding Crate. By J. H. Zeller, Animal Husbandry Division. Pp. 4. Contribution from the Bureau of Animal Industry. (**Farmers' Bulletin 966.**)

Preparation of Strawberries for Market. By C. T. More, Specialist in Market Grades and Standards and H. E. Truax, Assistant in Grades and Standards. Pp. 27, figs. 18. Contribution from the Bureau of Markets. (**Farmers' Bulletin 979.**)

DEPARTMENTAL BULLETINS—TECHNICAL.

The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

How to Candle Eggs. By M. E. Pennington, Chief, Food Research Laboratory, M. K. Jenkins, Assistant Bacteriologist, and H. M. P. Betts, Artist. Pp. 20, pls. 12, figs. 4. Contribution from the Bureau of Chemistry. May 11, 1918. (**Department Bulletin 565.**) Price, 40 cents.

Pasture Land on Farms in the United States. By E. A. Goldenweiser, Statistician, and J. S. Ball, Assistant in Farm Accounting. Pp. 94, figs. 7. Contribution from the Office of Farm Management. May 9, 1918. (**Department Bulletin 626.**) Price, 10 cents.

Five Years' Calf-Feeding Work in Alabama and Mississippi. By W. F. Ward and S. S. Jerdan, of the Animal Husbandry Division. Pp. 54. Contribution from the Bureau of Animal Industry. April 19, 1918. (**Department Bulletin 631.**) Price, 10 cents.

Cost of Production of Apples in the Payette Valley, Idaho. By S. M. Thompson, Scientific Assistant, G. H. Miller, Assistant Agriculturist. Pp. 36, pls. 2, figs. 8. Contribution from the Office of Farm Management. May 10, 1918. (**Department Bulletin 636.**) Price, 10 cents.

The Four Essential Factors in the Production of Milk of Low Bacterial Content. By S. Henry Ayers, Lee B. Cook, and Paul W. Clemmer, of the Dairy Division. Pp. 63, pls. 6, figs. 23. Contribution from the Bureau of Animal Industry. April 30, 1918. (**Department Bulletin 642.**) Price, 15 cents.

The Argentine Ant in Relation to Citrus Groves. By J. R. Horton, Scientific Assistant, Tropical and Subtropical Fruit Insect Investigations. Pp. 74. Contribution from the Bureau of Entomology. May 3, 1918. (**Department Bulletin 647.**) Price, 15 cents.

A Farm-Management Survey in Brooks County, Georgia. By E. S. Haskell, Assistant Agriculturist. Pp. 60, figs. 21. Contribution from the Office of Farm Management. May 1, 1918. (**Department Bulletin 648.**) Price, 10 cents.

A Farm-Management Study in Anderson County, South Carolina. By A. G. Smith, Agriculturist. Pp. 32, figs. 6. Contribution from the Office of Farm Management. May 8, 1918. (**Department Bulletin 651.**) Price, 5 cents.

Concord Grape Juice: Manufacture and Chemical Composition. By B. G. Hartmann, Fermentation Chemist, and L. M. Tolman, Chief, Central Food and Drug Inspection District. Pp. 27; fig. 1. Contribution from the Bureau of Chemistry. May 8, 1918. (**Department Bulletin 656.**) Price, 5 cents.

A Wheatless Ration for the Rapid Increase of Flesh on Young Chickens. By M. E. Pennington, Chief, H. A. McAleer, Investigator in Poultry and Egg Handling, and A. D. Greenlee, Assistant Chemist, assisted by A. W. Broomell, Assistant Chemist, L. E. Harker, Aid in Poultry and Egg Handling, and H. L. Shrader, Investigator in Poultry and Egg Handling, Food Research Laboratory. Pp. 12, pl. 1. Contribution from the Bureau of Chemistry. (**Professional Paper.**) May 2, 1918. (**Department Bulletin 657.**) Price, 5 cents.

Vesicular Stomatitis of Horses and Cattle. By John R. Mohler, Chief of the Bureau of Animal Industry. Pp. 11, pl. 1. Contribution from the Bureau of Animal Industry. (**Professional Paper.**) May 1, 1918. (**Department Bulletin 662.**) Price, 5 cents.

The Installation and Equipment of an Egg-Breaking Plant. By M. K. Jenkins, Assistant Bacteriologist, prepared under the direction of M. E. Pennington, Chief, Food Research Laboratory. Pp. 26, figs. 25. Contribution from the Bureau of Chemistry. (**Professional Paper.**) May 27, 1918. (**Department Bulletin 663.**) Price, 5 cents.

The Prevention of Breakage of Eggs in Transit when Shipped in Carlots. By M. E. Pennington, Chief, Food Research Laboratory, H. A. McAleer, Investigator in Poultry and Egg Handling, and A. D. Greenlee, Assistant Chemist, assisted by F. X. Dailey and H. C. Albin. Pp. 31, pls. 4, figs. 12. Contribution from the Bureau of Chemistry. April 25, 1918. (**Department Bulletin 664.**) Price, 20 cents.

Status of Farming in the Lower Rio Grande Irrigated District of Texas. By Rex E. Willard, Agriculturist. Pp. 24, figs. 10. Contribution from the Office of Farm Management. April 29, 1918. (**Department Bulletin 665.**) Price, 5 cents.

The Effect of Alkali Treatment on Cocoas. By Eugene Bloomberg, formerly Assistant Chemist, Buffalo Food and Drug Inspection Station. Pp. 20. Contribution from the Bureau of Chemistry. (**Professional Paper.**) May 9, 1918. (**Department Bulletin 666.**) Price, 5 cents.

Nurse Planting Select Cotton Seed. By P. V. Cardon, Assistant Agronomist, Office of Acclimatization and Adaptation of Crop Plants—Cotton Breeding. Pp. 12, figs. 4. Contribution from the Bureau of Plant Industry. May 21, 1918. (**Department Bulletin 668.**) Price, 5 cents.

Hemorrhagic Septicemia. By Henry J. Washburn, Senior Pathologist, Pathological Division. Pp. 11. Contribution from the Bureau of Animal Industry. (**Professional Paper.**) May 15, 1918. (**Department Bulletin 674.**) Price, 5 cents.

Influence of a City on Farming. (A study of types of farms and their organization in Jefferson County, Ky.) By J. H. Arnold, Agriculturist, and Frank Montgomery, Scientific Assistant. Pp. 24, figs. 3. Contribution from the Office of Farm Management. May 7, 1918. (**Department Bulletin 678.**) Price, 5 cents.

The Application of Optical Methods of Identification to Alkaloids and Other Organic Compounds. By Edgar T. Wherry, Crystallographer. Pp. 9. Contribution from the Bureau of Chemistry. (**Professional Paper.**) May 20, 1918. (**Department Bulletin 679.**) Price, 5 cents.

Grain-Dust Explosions, Investigation in the Experimental Attrition Mill at the Pennsylvania State College. By B. W. Dedrick, Instructor in Milling Engineering, and R. B. Fehr, Assistant Professor of Mechanical Engineering, The Pennsylvania State College, in collaboration with David J. Price, Engineer in Charge Grain-Dust Explosion Investigations, Bureau of Chemistry, Department of Agriculture. Pp. 54, pls. 4, figs. 5. Contribution from the Bureau of Chemistry. May 18, 1918. (Department Bulletin 681.) Price, 10 cents.

Marketing Berries and Cherries by Parcel Post. By C. C. Hawbaker, Assistant in Marketing by Parcel Post, and Charles A. Burmeister, Scientific Assistant. Pp. 18, figs. 10. Contribution from the Bureau of Markets. May 18, 1918. (Department Bulletin 688.) Price, 5 cents.

MISCELLANEOUS.

Inventory of Seeds and Plants Imported by the Office of Foreign Seed and Plant Introduction During the Period from January 1 to March 31, 1915. Pp. 123, pls. 9. April 17, 1918. (Inventory No. 42; Nos. 39682 to 40388.) Bureau of Plant Industry. Price, 20 cents.

Inventory of Seeds and Plants Imported by the Office of Foreign Seeds and Plant Introduction During the Period from April 1 to June 30, 1915. Pp. 106, pls. 5. March 30, 1918. (Inventory No. 43 Nos. 40389 to 40895.) Bureau of Plant Industry. Price, 5 cents.

Use Barley—Save Wheat. Pp. 4. Contribution from States Relations Service. April 18, 1918. (Circular 111, Office of the Secretary.)

Use Soy-Bean Flour to Save Wheat, Meat, and Fat. Pp. 4. Contribution from the States Relations Service. May 2, 1918. (Circular 113, Office of the Secretary.)

SERIALS.

Journal of Agricultural Research. (For sale only.) Vol. 13, No. 2. April 8, 1918. Contents: Soil Fungi in Relation to Diseases of the Irish Potato in Southern Idaho. (mw G-139) By O. A. Pratt.—Investigations Concerning the Sources and Channels of Infection in Hog Cholera. (mt A-36) By M. Dorset, C. N. McBryde, W. B. Niles, and J. H. Rietz.—Effect of Temperature and Other Meteorological Factors on the Growth of Sorghums. (mr G-140) By H. N. Vinall and H. R. Reed. Pp. 73-148, pls. 4, figs. 5. Price, 35 cents.

Same, Vol. 13, No. 4. April 22, 1918. Contents: Relation between Biological Activities in the Presence of Various Salts and the Concentration of the Soil Solution in Different Classes of Soil. (nd Mich.-8) By C. E. Millar.—Bacterial Flora of Roquefort Cheese. (mu A-37) By Alice C. Evans.—A Study of the Streptococci Concerned in Cheese Ripening. (mv A-38) By Alice C. Evans.—Intumescences, with a Note on Mechanical Injury as a Cause of Their Development. (ne N. C.-10) By Frederick A. Wolf. Pp. 213-259, pls. 2, fig. 1. Price, 15 cents.

Same, Vol. 13, No. 5. April 29, 1918. Contents: Anthracnose of Lettuce Caused by *Marssonia panattoniana*. (ng B-14) By E. W. Brandes.—The Calcium Arsenates. (mz Oreg.-3) By R. H. Robinson.—*Stemphylium* Leafspot of Cucumbers. (ne Ind.-3) By George A. Osner. Pp. 261-306, pls. 6, figs. 7. Price, 25 cents.

Same, Vol. 13, No. 6. May 6, 1918. Contents: Yellow-Leafblotch of Alfalfa Caused by the Fungus *Pyrenopeziza medicaginis*. (nf G-142) By Fred Reuel Jones.—An Undescribed Canker of Poplars and Willows Caused by *Cytospora chrysosperma*. (nh G-143) By W. H. Long. Pp. 307-345, pls. 5, figs. 6. Price, 15 cents.

Same, Vol. 13, No. 7. May 13, 1918. Contents: Chemistry of the Cotton Plant, with Special Reference to Upland Cotton. (ni E-8) By Arno Viehoever, Lewis H. Chernoff and Carl O. Johns.—Stability of Olive Oil. (nj Mass.-5) By E. B. Holland, J. C. Reed, and J. P. Buckley, Jr.—Some Bacterial Diseases of Lettuce. (nk G-144) By Nellie A. Brown. Pp. 345-388, pls. 14, fig. 1. Price, 35 cents.

Experiment Station Record. Vol. 37. Index Number. E. W. Allen, Ph. D. Pp. XXV + 901-990. Price, 15 cents.

Same, Vol. 38, No. 3. Abstract Number. April 22, 1918. Pp. 201-300. Price, 15 cents.

Same, Vol. 38, No. 4. March, 1918. Pp. 301-400. Price, 15 cents.

Same. Vol. 38, No. 5. April, 1918. Pp. 401-500. Price, 15 cents.

NOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, 10 numbers each, at \$1 a volume.

The Monthly Crop Report. Vol. 4, No. 5. May, 1918. Pp. 45-56. (Bureau of Crop Estimates.)

SERVICE AND REGULATORY ANNOUNCEMENTS—FOR SALE ONLY.

These contain *only* information, instructions, and notices governing the enforcement of food and drugs act, meat inspection, 28-hour, and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. *Free distribution* is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale *only*, at prices noted.

SOIL SURVEYS.

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Reconnaissance Soil Survey of the San Diego Region, California. By L. C. Holmes, of the U. S. Department of Agriculture, In Charge, and R. L. Pendleton, of the University of California. Pp. 77, pls. 4, map. (**From F. O. Soils, 1915.**) Price, 15 cents.

Soil Survey of Hillsborough County, Florida. By Charles N. Mooney, In Charge, T. M. Morrison, Grove B. Jones, E. C. Hall, and N. M. Kirk. Pp. 42, fig. 1, map. (**From F. O. Soils, 1916.**) Price, 15 cents.

Soil Survey of Taylor County, Texas. By William G. Smith, In Charge, A. E. Kocher, R. F. Rogers, and W. I. Watkins. Pp. 40, figs. 2, map. (**From F. O. Soils, 1915.**) Price, 15 cents.

Soil Survey of Jefferson, Berkeley, and Morgan Counties, West Virginia. By W. J. Latimer. Pp. 74, pls. 2, map. (**From F. O. Soils, 1916.**) Price, 15 cents.

SEPARATES.

Cheesemaking brings Prosperity to Farmers of Southern Mountains. By C. F. Doane and A. J. Reed, Bureau of Animal Industry. Pp. 8, pls. 5. (**Separate 737, Yearbook, 1917.**) Price, 5 cents.

Hides and Skins: Production, Foreign Trade, Supply, and Consumption. By George K. Holmes, Bureau of Crop Estimates. Pp. 24. (**Separate 741, Yearbook, 1917.**) Price, 5 cents.

The Peanut, a Great American Food. By H. S. Bailey and J. A. Le Clerc, Bureau of Chemistry. Pp. 15, pls. 2. (**Separate 746, Yearbook, 1917.**) Price, 5 cents.

Growth of the Beef-Cattle Industry in the South. By F. W. Farley. Bureau of Animal Industry. Pp. 16, pls. 4. (**Separate 749, Yearbook, 1917.**) Price, 5 cents.

Sheep and Intensive Farming. By F. R. Marshall. Bureau of Animal Industry. Pp. 12, pls. 2. (**Separate 750, Yearbook, 1917.**) Price, 5 cents.

Pig Clubs and the Swine Industry. By J. D. McVean, Bureau of Animal Industry. Pp. 16, pls. 8. (**Separate 753, Yearbook, 1917.**) Price, 5 cents.

Live Stock, 1917, and Miscellaneous Data. Pp. 51. (**Separate 761, Yearbook, 1917.**) Price, 5 cents.

Imports and Exports of Agricultural Products. Pp. 43. (**Separate 762, Yearbook, 1917.**) Price, 5 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

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Monthly Weather Review. (For sale only.) Vol. 46, No. 1. January, 1918, Mar. 30, 1918. Pp. 1-54, charts 9, figs. 6. Price, 25 cents per copy, \$2.50 per year. Payable to the Superintendent of Documents.

Special articles: Solar and sky radiation during January, 1918. By H. H. Kimball.—Mathematical theory of sound ranging. By H. Bateman.—Mean values of free-air pressures, temperatures, and densities over the United States. By W. R. Gregg.—Turning of winds with altitude. By W. R. Gregg.—Halo of Jan. 10, 1918, at Boulder, Colo. By O. C. Lester.—Diffraction of light in the formation of haloes. By S. W. Visser.—Horizontal oscillation of the free atmosphere up to 10 km. at Batavia. By W. van Bemmelen and J. Boerema.—Early use of kites in military operations. By C. C. Chu.—Air chimneys of ice below a waterfall. By R. E. Horton.—Cyclones, tornadoes, thunderstorms, squalls. By A. J. Henry.

Vol. 46, No. 2, February, 1918. (April 6, 1918.) Pp. 55-113, charts 9, figs. 14. 25 cents per copy, \$2.50 per year. Payable to the Superintendent of Documents.

Special articles: Solar and sky radiation during February, 1918. By H. H. Kimball.—Nocturnal radiation measurements. By H. H. Kimball.—Molecular scattering of light. By Ch. Fabry.—Partial correlation applied to Dakota data on weather and wheat yield. By T. A. Blair.—Nomenclature of the Unit of absolute pressure. By C. F. Marvin.—Daylight-saving act of March 19, 1918.—Diagrams showing conditions and effects of the daylight-saving act. By C. F. Marvin.—“Summer time” and the British Meteorological Office. By Sir Napier Shaw.—“Summer time” or daylight saving in other countries.—Rainfall of 1917 in the British Isles.—Weather and Honey Production. By L. A. Kenoyer.—Former official enrolled in Naval Reserve Flying Corps.—Forecasts and warnings for February, 1918. By A. J. Henry.—Ice in Rivers, 1917-18. By A. J. Henry.—Great Lakes levels during February, 1918.

Supplement No. 8. May 17, 1918. Pp. 111, figs. 12. Price, 25 cents.

Supplement No. 9. May 1, 1918. Pp. 42, figs. 24. Price, 25 cents.

National Weather and Crop Bulletin, Nos. 4, 5, 6, 7, April, 1918. Reporting temperature, rainfall, and crop conditions throughout the United States.

National Weather and Crop Bulletin, Nos. 8, 9, 10, 11, 12, May, 1918. Reporting temperature, rainfall, and crop conditions throughout the United States.

FRANCIS J. P. CLEARY,
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Potato Culture Under Irrigation. By William Stuart, Horticulturist, C. F. Clark, Assistant Agronomist, and George W. Dewey, Scientific Assistant, Office of Horticultural and Pomological Investigations. Pp. 24, figs. 16. Contribution from the Bureau of Plant Industry. (*Farmers' Bulletin 953.*)

For general distribution.

Curing Hay on Trucks; A Method by which a Good Quality of Hay may be Cured During Unfavorable Weather. By H. B. McClure, Agriculturist. Pp. 19, figs. 11. Contribution from the Office of Farm Management. (*Farmers' Bulletin 956.*)

Suitable for general distribution.

Standard Broom Corn. By Benton E. Rothgeb, Scientific Assistant in Grain-Sorghum and Broom-Corn Investigations. Pp. 20, figs. 6. Contribution from the Bureau of Plant Industry. (*Farmers' Bulletin 958.*)

Suitable for distribution in the Eastern and Central Western States.

Tractor Experience in Illinois: A Study of the Farm Tractor Under Corn-Belt Conditions. By Arnold P. Yerkes, Assistant Agriculturist, and L. M. Church, Assistant in Farm Accounting. Pp. 30, fig. 1. Contribution from the Office of Farm Management. (*Farmers' Bulletin 963.*)

For general distribution.

Growing Grain Sorghums in the San Antonio District of Texas. By C. R. Letteer, Farm Superintendent, Office of Western Irrigation Agriculture. Pp. 12, figs. 4. Contribution from the Bureau of Plant Industry. (*Farmers' Bulletin 965.*)

For distribution in the district named.

Cultivation and Utilization of Barley. By Harry V. Harlan, Agronomist in Charge of Barley Investigations, Office of Cereal Investigations. Pp. 39, figs. 10. Contribution from the Bureau of Plant Industry. (*Farmers' Bulletin 968.*)

Suitable for general distribution.

Sweet-Potato Storage. By H. C. Thompson, Horticulturist, Office of Horticultural and Pomological Investigations. Pp. 27, figs. 15. Contribution from the Bureau of Plant Industry. (*Farmers' Bulletin 970.*)

Suitable for general distribution.

The Control of the Clover-Flower Midge. By C. W. Creel and L. P. Rockwood, Scientific Assistants, Cereal and Forage Insect Investigations. Pp. 12, figs. 6. Contribution from the Bureau of Entomology. (*Farmers' Bulletin 971.*)
For general distribution.

Farm and Home Drying of Fruits and Vegetables. By Joseph S. Caldwell, Plant Physiologist, Office of Horticultural and Pomological Investigations. Pp. 61, figs. 13. Contribution from the Bureau of Plant Industry. (*Farmers' Bulletin 984.*)
For general distribution.

Labor-Saving Practices in Haymaking Shown Pictorially. By H. B. McClure, Agriculturist. Pp. 20, figs. 33. Contribution from the Office of Farm Management. (*Farmers' Bulletin 987.*)

A picture story of right and wrong methods of the different operations in haymaking.

Better Use of Man Labor on the Farm. By H. R. Tolley, Scientific Assistant, and A. P. Yerkes, Assistant Agriculturist. Pp. 15, figs. 22. Contribution from the Office of Farm Management. (*Farmers' Bulletin 989.*)
For general distribution.

The Efficient Operation of Threshing Machines. By H. R. Tolley, Scientific Assistant. Pp. 15. Contribution from the Office of Farm Management. (*Farmers' Bulletin 991.*)
Suitable for general distribution.

Commercial Bordeaux Mixtures: How to Calculate Their Values. By Errett Wallace, Pathologist, and L. H. Evans, Scientific Assistant, Office of Fruit-Disease Investigations, in cooperation with the Insecticide and Fungicide Board. Pp. 11, fig. 1. Contribution from the Bureau of Plant Industry. (*Farmers' Bulletin 994.*)
For general distribution.

DEPARTMENTAL BULLETINS—TECHNICAL.

The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information, as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

Tests of the Absorption and Penetration of Coal Tar and Creosote in Longleaf Pine. By Clyde H. Teesdale, in charge, Section of Wood Preservation, and J. D. MacLean, Assistant Engineer in Forest Products, Forest Products Laboratory, Madison, Wisconsin. Pp. 43, pls. 11, figs. 12. Contribution from the Forest Service. (Professional Paper.) June 7, 1918. (*Department Bulletin 607.*) Price, 15 cents.
Of interest to engineers and builders generally.

The Wet Lands of Southern Louisiana and Their Drainage. By Charles W. Okey, Senior Drainage Engineer. Pp. 67, pl. 1, figs. 15, map. Contribution from the Office of Public Roads and Rural Engineering. (Professional Paper.) June 6, 1918. (*Department Bulletin 652.*) Price, 20 cents.

This is a revision of Department Bulletin 71 and contains information of value to landowners, engineers, and others interested in drainage by pumping, especially of the wet prairies along the Gulf coast.

Farm Organization in the Irrigated Valleys of Southern Arizona. By R. W. Clothier, Agriculturist. Pp. 59, figs. 12. Contribution from the Office of Farm Management. June 14, 1918. (*Department Bulletin 654.*) Price, 10 cents.

Shows results of a farm survey of 627 farms in southern Arizona and is of interest to all farmers in said section.

Forest-Disease Surveys. By James R. Weir, Forest Pathologist, and Ernest E. Hubert, Scientific Assistant, Office of Investigations in Forest Pathology, Bureau of Plant Industry, Missoula, Montana. Pp. 23, figs. 23. Contribution from the Bureau of Plant Industry. (Professional Paper.) June 12, 1918. (*Department Bulletin 658.*) Price, 5 cents.

A Farm-Management Study of Cotton Farms of Ellis County, Texas. By Rex E. Willard, Agriculturist. Pp. 54, figs. 19. Contribution from the Office of Farm Management. June 17, 1918. (*Department Bulletin 659.*) Price, 10 cents.

A statistical study of the investment in land and equipment, cost of operation and of production of crops, and income from different types of tenure in 1914.

Car-Lot Shipments of Fruits and Vegetables in the United States in 1916. By Paul Froehlich, Assistant in Market Surveys. Pp. 196. Contribution from the Bureau of Markets. June 8, 1918. (*Department Bulletin 667.*) Price, 20 cents.

Of interest to wholesale dealers in, and shippers of, fruits and vegetables.

The Diagnosis of Bee Diseases by Laboratory Methods. By Arthur H. McCray, Agricultural Assistant, and G. F. White, Expert in the Investigation of Bee Diseases. Pp. 15, pls. 2. Contribution from the Bureau of Entomology. (Professional Paper.) June 21, 1918. (*Department Bulletin 671.*) Price, 5 cents.
Of interest to bee-disease inspectors.

The Duck Sickness in Utah. By Alexander Wetmore, Assistant Biologist. Pp. 26, pls. 4. Contribution from the Bureau of Biological Survey. (Professional Paper.) June 21, 1918. (*Department Bulletin 672.*) Price, 10 cents.

A report on the mortality among wild ducks and other waterfowl in marshes about Great Salt Lake, Utah.

Range Preservation and Its Relation to Erosion Control on Western Grazing Lands. By Arthur W. Sampson, Plant Ecologist, and Leon H. Weyl, Grazing Examiner. Pp. 35, pls. 6, figs. 8. Contribution from the Forest Service. June 25, 1918. (Department Bulletin 675.) Price, 10 cents.

Describes the damage done by erosion due to overgrazing and gives remedial measures.

Honeybees and Honey Production in the United States. By S. A. Jones, Chief, Field Service, Bureau of Crop Estimates. Pp. 61. Contribution from the Bureau of Crop Estimates. June 20, 1918. (Department Bulletin 685.) Price, 10 cents.

Suitable for general distribution.

Further Studies of the Rots of Strawberry Fruits. By Neil E. Stevens, Pathologist, and R. B. Wilcox, Scientific Assistant, Fruit-Disease Investigations. Pp. 14. Contribution from the Bureau of Plant Industry. (Professional Paper.) June 24, 1918. (Department Bulletin 686.) Price, 5 cents.

Of especial interest to growers and shippers of strawberries generally.

Digestibility of Some Seed Oils. By A. D. Holmes, Specialist in Charge of Digestion Experiments, Office of Home Economics. Pp. 20. Contribution from the States Relations Service. (Professional Paper.) June 28, 1918. (Department Bulletin 687.) Price, 5 cents.

This bulletin records studies of the digestibility of corn oil, soy-bean oil, sunflower-seed oil, Japanese mustard-seed oil, rapeseed oil, and charlock oil. It is primarily of interest to students and investigators of food problems.

MISCELLANEOUS. .

Yearbook of the U. S. Department of Agriculture, 1917. Pp. 853, pls. 77, figs. 14, maps and graphs 90. Price, \$1.00.

This Yearbook contains the annual report of the Secretary, 61 pages; 35 miscellaneous articles, 543 pages; an appendix, 197 pages; an index, 55 pages. Only 6 out of each 100 copies are allotted to this department, which number is insufficient to supply even its regular correspondents. Other applicants are therefore respectfully referred to their Representative or Delegate in Congress, as the other 94 per cent is allotted to that body. The Superintendent of Documents, Government Printing Office, Washington, D. C., has it for sale at \$1.00 per copy.

List of Workers in Subjects Pertaining to Agriculture and Home Economics, 1917-18. Prepared in the Division of Publications and the States Relations Service. Pp. 157. Price, 10 cents.

Revision of the American Flying Squirrels. By Arthur R. Howell, Assistant Biologist, Biological Survey. Pp. 64, pls. 7, figs. 4. June 13, 1918. (North American Fauna No. 44.) Price, 15 cents.

The Work of the Yuma Reclamation Project Experiment Farm in 1916. By R. E. Blair, Farm Superintendent. Pp. 40, figs. 12. (W. A. I. Cir. 20, Bureau of Plant Industry.) Of interest to farmers on said project.

SERIALS.

Journal of Agricultural Research. (For sale only. Vol. 13, No. 8, May 20, 1918. Contents: Hydration Capacity of Gluten from "Strong" and "Weak" Flours. (no Minn.-27) By R. A. Gortner and E. H. Doherty.—Chemistry and Histology of the Glands of the Cotton Plant, with Notes on the Occurrence of Similar Glands in Related Plants. (nl E-9) By Ernest E. Stanford and Arno Viehoever. Pp. 389-436, pls. 8, figs. 17. Price, 30 cents.

Same, Vol. 13, No. 9, May 27, 1918. Contents: Pot or Pit (Soilrot) of the Sweet Potato. (nm Tex.-1) By J. J. Taubenhaus.—Boron: Its Effect on Crops and Its Distribution in Plants and Soil in Different Parts of the United States. (nn E-10) By F. C. Cook and J. B. Wilson. Pp. 437-470, pls. 2. Price, 15 cents.

Same, Vol. 13, No. 10, June 3, 1918. Contents: Destruction of Tetanus Antitoxin by Chemical Agents. (nr A-39) By W. N. Berg and R. A. Kelsler.—Relation of the Density of Cell Sap to Winter Hardiness in Small Grains. (ns Kans.-12) By S. C. Salmon and F. L. Fleming.—Influence of Temperature and Precipitation on the Blackleg of Potato. (nq G-145) By J. Rosenbaum and G. B. Ramsey.—A New Bacterial Disease of Gipsy-Moth Caterpillars. (nt K-65) By R. W. Glaser. Pp. 471-522, pls. 2, figs. 5. Price, 10 cents.

Same, Vol. 13, No. 11, June 10, 1918. Contents: Physical Properties Governing the Efficacy of Contact Insecticides. (nv Minn.-28) By William Moore and S. A. Graham.—Inoculation Experiments with Species of Coccomyces from Stone Fruits. (np Wis.-12) By G. W. Keitt.—Nysius ericae, the False Chinch Bug. (nu K-66) By F. B. Milliken.—Comparative Transpiration of Corn and the Sorghums. (ny Kans.-13) By Edwin C. Miller and W. B. Coffman. Pp. 523-604, pls. 9, figs. 18. Price, 25 cents.

Same, Vol. 13, No. 12, June 17, 1918. Contents: Inorganic Composition of a Peat and of the Plant from Which it Was Formed. (nw H-5) By C. F. Miller.—Digestibility of Corn Silage, Velvet-Bean Meal, and Alfalfa Hay when fed singly and in combinations. (oa Tex.-3) By P. V. Ewing and F. H. Smith.—Effects of Various Salts, Acids, Germicides, etc., Upon the Infectivity of the Virus Causing the Mosaic Disease of Tobacco. (nz G-146) By H. A. Allard.—A Study of the Physical Changes in Feed Residues Which Takes Place in Cattle During Digestion. (nx Tex.-2) By P. V. Ewing and L. H. Wright.—Sunscald of Beans. (ob G-147) By H. G. MacMillan.—A Third Biologic Form of Puccinia graminis on Wheat. (oj Minn.-30) By M. N. Levine and E. C. Stakman. Pp. 605-654, pls. 3. Price, 10 cents.

Experiment Station Record. Vol. 38, No. 6. Abstract Number. June 14, 1918. E. W. Allen, Ph. D., Editor. Pp. 501-600. Price, 15 cents.

~~All~~ Note.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, 10 numbers each, at \$1 a volume.

The Monthly Crop Report. Vol. 4, No. 6, June 1918. Pp. 57-68. (Bureau of Crop Estimates.)

Contains data relating to agriculture, including estimates of acreage, conditions, yields, prices, and value of crops and live stocks. For free distribution.

SOIL SURVEYS.

~~All~~ All requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

Soil Survey of Ringgold County, Iowa. By E. C. Hall and W. E. Tharp, of the U. S. Department of Agriculture, and F. B. Howe, of the Iowa Agricultural Experiment Station. Pp. 29, fig. 1, map. (From *F. O. Soils*, 1916.) Price, 15 cents.

Soil Survey of Rapides Parish, Louisiana. By E. H. Smies, Riden T. Allen, J. B. R. Dickey, W. A. Rockie, R. C. Journey, R. R. Burn, M. Earl Carr, and Hugh H. Bennett. Pp. 43, fig. 1, map. (From *F. O. Soils*, 1916.) Price, 15 cents.

Soil Survey of Newton County, Mississippi. By A. L. Goodman, of the U. S. Department of Agriculture, and E. M. Jones, of the Mississippi Geological Survey. Pp. 43, fig. 1, map. (From *F. O. Soils*, 1916.) Price, 15 cents.

Soil Survey of Dodge County, Nebraska. By B. W. Tillman, of the U. S. Department of Agriculture, and H. C. Mortlock, of the Nebraska Soil Survey. Pp. 53, fig. 1, map. (From *F. O. Soils*, 1916.) Price, 15 cents.

Soil Survey of Hall County, Nebraska. By J. O. Veatch, of the U. S. Department of Agriculture, and V. H. Seabury, of the Nebraska Soil Survey. Pp. 41, fig. 1, map. (From *F. O. Soils*, 1916.) Price, 15 cents.

Soil Survey of Richland County, South Carolina. By Cornelius Van Duyne, W. E. McLendon, and Thomas D. Rice. Pp. 72, fig. 2, map. (From *F. O. Soils*, 1916.) Price, 15 cents.

SEPARATES.

Federal Aid to Highways. By J. E. Pennybacker and L. E. Boykin, Office of Public Roads and Rural Engineering. Pp. 13, fig. 1. (Separate 739, Yearbook 1917.) Price, 5 cents.

The Soy-Bean Industry in the United States. By W. J. Morse, Bureau of Plant Industry. Pp. 13, pls. 6. (Separate 740, Yearbook 1917.) Price, 5 cents.

Breeding Horses for the United States Army. By H. H. Reese, Bureau of Animal Industry. (Separate 754, Yearbook 1917.) Price, 5 cents.

Cereal Diseases and the National Food Supply. By Harry B. Humphrey, Bureau of Plant Industry. Pp. 16, pls. 4. (Separate 755, Yearbook 1917.) Price, 5 cents.

The Seed Supply of the Nation. By R. A. Oakley, Bureau of Plant Industry. Pp. 42, pls. 4. (Separate 757, Yearbook 1917.) Price, 5 cents.

A Graphic Summary of Seasonal Work on Farm Creps. By O. E. Baker, C. F. Brooks, and R. G. Hainsworth, Office of Farm Management. Pp. 55, figs. 90. (Separate 758, Yearbook 1917.) Price, 10 cents.

Statistics of Crops Other Than Grain Crops, 1917. Pp. 55. (Separate 760, Yearbook 1917.) Price, 5 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

~~All~~ Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

National Weather and Crop Bulletin. Nos. 12, 13, 14, 15, June 1918, reporting temperature, rainfall, and crop conditions throughout the United States. Issued Weekly, on Wednesday, April to October; monthly remainder of year. Price, 25 cents a year.

FRANCIS J. P. CLEARY,
Acting Chief, Division of Publications.

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This circular will be sent regularly to all who apply for it.

United States Department of Agriculture,

WASHINGTON, D. C., July 31, 1918.

MONTHLY LIST OF PUBLICATIONS.

[JULY 31, 1918.]

READ CAREFULLY BEFORE ORDERING.

~~DO NOT~~ Send no remittances to the U. S. Department of Agriculture.

A copy of any of the publications listed herein, except those otherwise noted, may be obtained free upon application to the Chief of the Division of Publications, United States Department of Agriculture, Washington, D. C., as long as the department's supply lasts.

After this department's supply is exhausted, publications can still be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., but by purchase only, and at the prices noted herein.

~~DO NOT~~ Send all remittances to the Superintendent of Documents direct. His office is not a part of the Department of Agriculture.

FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

~~DO NOT~~ NOTE.—The department's supply of the current numbers of Farmers' Bulletin is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy.

Sugar-Beet Growing Under Irrigation. By C. O. Townsend, in charge of Sugar-Plant Investigations. Pp. 28, figs. 5. (**Farmers' Bulletin 567, Revised Edition.**)

For distribution in the Northern and Western States where irrigation is necessary for crop production.

Rodent Pests of the Farm. By David E. Lantz, Assistant Biologist. Pp. 23, figs. 15. Contribution from the Bureau of Biological Survey. (**Farmers' Bulletin 932.**) Suitable for general distribution.

Hog Pastures for the Southern States. By Lyman Carrier, Agronomist in Charge of Pasture Investigations, Bureau of Plant Industry, and F. G. Ashbrook, Junior Animal Husbandman in Swine Investigations, Bureau of Animal Industry. Pp. 20, figs. 3. Contribution from the Bureau of Plant Industry and the Bureau of Animal Industry. (**Farmers' Bulletin 951.**)

For general distribution in the Southern States.

Breeds of Light Horses. By H. H. Reese, Animal Husbandry Division. Pp. 16, figs. 9. Contribution from the Bureau of Animal Industry. (**Farmers' Bulletin 952.**)

Gives information regarding the Arabian, Thoroughbred, Standardized, American Saddle, Morgan, Hackney, French Coach, German Coach, and Cleveland Bay breeds of horses.

Neufchâtel and Cream Cheese: Farm Manufacture and Use. By K. J. Matheson and F. R. Cammack, Dairy Division. Pp. 35, figs. 12. Contribution from the Bureau of Animal Industry. (**Farmers' Bulletin 960.**)

Suitable for general distribution.

Transferring Bees to Modern Hives. By E. L. Sechrist, Apicultural Assistant. Pp. 15, figs. 5. Contribution from the Bureau of Entomology. (**Farmers' Bulletin 961.**)

Of interest to all bee keepers.

Velvet Beans. By S. M. Tracy, Agronomist, and H. S. Coe, Assistant Agronomist, Office of Forage-Crop Investigations. Pp. 39, figs. 14. Contribution from the Bureau of Plant Industry. (*Farmers' Bulletin* 962.)

Suitable for distribution in the Atlantic and Gulf Costal Plain areas of the cotton belt.

Farm Household Accounts. By W. C. Funk, Scientific Assistant. Pp. 11, figs. 6. Contribution from the Office of Farm Management. (*Farmers' Bulletin* 964.)

Shows the value of household accounts, and the method of keeping records of same.

Purple Vetch. By Roland McKee, Assistant Agrostologist, Office of Forage-Crop Investigations. Pp. 12, figs. 8. Contribution from the Bureau of Plant Industry. (*Farmers' Bulletin* 967.)

A description of a new crop promising to prove of special value for green manure in the southwestern United States, and as a seed crop in western Oregon.

How to Use Sorghum Grain. By Carleton R. Ball, Cerealist in Charge of Cereal Investigations, and Benton E. Rothgeb, Scientific Assistant in Charge of Grain-Sorghum and Broom-Corn Investigations. Pp. 18, figs. 7. Contribution from the Bureau of Plant Industry. (*Farmers' Bulletin* 972.)

Is suitable for general distribution in the southern part of the Great Plains area and in California, and to grain dealers, poultry raisers, and alcohol manufacturers anywhere.

The Control of European Foulbrood. By E. F. Phillips, Apiculturist. Pp. 16, fig. 1. Contribution from the Bureau of Entomology. (*Farmers' Bulletin* 975.)

For general distribution.

Hay Caps. By H. B. McClure, Agriculturist. Pp. 16, figs. 2. Contribution from the Office of Farm Management. (*Farmers' Bulletin* 977.)

Describes the various kinds and durability of hay caps and gives costs and method of using same. Suitable for general distribution.

Handling Barnyard Manure in Eastern Pennsylvania. By D. A. Brodie, Agriculturist. Pp. 24, figs. 4. Contribution from the Office of Farm Management. (*Farmers' Bulletin* 978.)

This bulletin describes the manure-yard method of handling manure and outlines the farm practices of ten successful farmers who follow this method.

DEPARTMENTAL BULLETINS—TECHNICAL.

The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information, as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

Stock-Poisoning Plants of the Range. By C. D. Marsh, Physiologist, Pathological Division. Pp. 24, pls. 30. Contribution from the Bureau of Animal Industry. July 23, 1918. (*Department Bulletin* 575.) Price, — cents.

Of interest to sheep and cattle raisers on western stock ranges.

Citrus-Fruit Improvement: A Study of Bud Variation in the Washington Navel Orange. By A. D. Shamel, Physiologist in Charge; L. B. Scott, Pomologist; and C. S. Pomeroy, Assistant Pomologist, Fruit Improvement Investigations, Office of Horticultural and Pomological Investigations. Pp. 146, pls. 16, figs. 14. Contribution from the Bureau of Plant Industry. (*Professional Paper*.) July 22, 1918. (*Department Bulletin* 623.) Price, 15 cents.

Citrus-Fruit Improvement: A Study of Bud Variation in the Valencia Orange. By A. D. Shamel, Physiologist in Charge; L. B. Scott, Pomologist; and C. S. Pomeroy, Assistant Pomologist, Fruit Improvement Investigations, Office of Horticultural and Pomological Investigations. Pp. 120, pls. 14, figs. 9. Contribution from the Bureau of Plant Industry. (*Professional Paper*.) July 25, 1918. (*Department Bulletin* 624.) Price, 25 cents.

Not available for free distribution through this Department.

A Study of Prices and Quality of Creamery Butter. By G. P. Warber, Assistant in Marketing Dairy Products. Pp. 24, figs. 3. Contribution from the Bureau of Markets. July 15, 1918. (*Department Bulletin* 682.) Price, 5 cents.

A study as to the differences in prices of creamery butter in different cities, with suggestions as to marketing same.

The Southern Green Plant-Bug. By Thomas H. Jones, Entomological Assistant. Pp. 27, figs. 11. Contribution from the Bureau of Entomology. (*Professional Paper*.) July 30, 1918. (*Department Bulletin* 689.) Price, 10 cents.

Of interest to growers of vegetable and truck crops, Southern States, especially bordering the Gulf of Mexico.

Marketing Practices of Wisconsin and Minnesota Creameries. By Roy C. Potts, Specialist in Marketing Dairy Products. Pp. 15, figs. 5. Contribution from the Bureau of Markets. July 23, 1918. (*Department Bulletin* 690.) Price, 5 cents.

Should be of interest to creamery men and dairy farmers in the United States.

Typical Specifications for Bituminous Road Materials. By Prevost Hubbard, Chemical Engineer, and Charles S. Reeve, Chemist. Pp. 60, figs. 8. Contribution from the Office of Public Roads and Rural Engineering. July 10, 1918. (*Department Bulletin* 691.) Price, 10 cents.

Of interest to road contractors and engineers.

The Agricultural Species of Bent Grasses. Part I. Rhode Island Bent and Related Grasses. By Charles V. Piper, Agrostologist. Part II. The Seeds of Redtop and Other Bent Grasses. By H. T. Hillman, Assistant Botanist. Pp. 27, figs. 11. Contribution from the Bureau of Plant Industry. (*Professional Paper*.) July 23, 1918. (*Department Bulletin* 692.) Price, 5 cents.

A discussion of the identity and characteristics of Rhode Island bent, redtop, florin, velvet bent, and creep-bent grasses. Of interest to seedsmen generally.

Farm Practice in Growing Sugar Beets for Three Districts in Utah and Idaho, 1914-15. By L. A. Moorhouse, T. H. Summers, and R. S. Washburn, Office of Farm Management, and James W. Jones, Bureau of Plant Industry. Pp. 44, figs. 8. Contribution from the Office of Farm Management and the Bureau of Plant Industry. July 16, 1918. (Department Bulletin 693.) Price, 10 cents.

A detailed study of field operations and current cost factors involved in the production of this crop in 1914-15 on 173 farms in the Provo and Garland districts, Utah, and the Idaho Falls district, Idaho.

A Study of Farm Management Problems in Lenawee County, Michigan. By H. M. Dixon, Assistant Agriculturist, and J. A. Drake, Agriculturist. Pp. 36, figs. 8. Contribution from the Office of Farm Management. July 24, 1918. (Department Bulletin 694.) Price, 10 cents.

Presents data obtained in a survey of 300 owner farms and 153 tenant farms in said county.

Profitable Management of General Farms in the Willamette Valley, Oregon. By Byron Hunter and S. O. Jayne, Agriculturists. Pp. 24, figs. 5. Contribution from the Office of Farm Management. July 27, 1918. (Department Bulletin 705.) Price, 5 cents.

Of interest to all farmers in said valley.

American Sumac: A Valuable Tanning Material and Dyestuff. By F. P. Veitch, Chemist in Charge, and J. S. Rogers, Assistant Chemist, Leather and Paper Laboratory. Pp. 12, pls. 5. Contribution from the Bureau of Chemistry. July 26, 1918. (Department Bulletin 706.) Price, 5 cents.

Of interest to tanners and manufacturers of dyestuffs.

Suitable Storage Conditions for Certain Food Products: Apples, Potatoes, Sweet Potatoes, Onions, Cabbage, Eggs, Poultry, Butter, and Fish. Pp. 10 and poster in pocket. Contribution from the Bureau of Markets. July 24, 1918. (Department Bulletin 729.) None for sale.

Prepared for use of the Federal Reserve Board, and is of value to managers of storage warehouses, members of the Federal Reserve Banks, and producers of farm products.

Recent Experimental Work on Poisoning Cotton-Boll Weevils. By B. R. Coad, Entomological Assistant, Southern Field-Crop Insect Investigations. Pp. 15, figs. 10. Contribution from the Bureau of Entomology. July 19, 1918. (Department Bulletin 731.) Price, 5 cents.

Of interest to cotton growers generally.

SERIALS.

Journal of Agricultural Research. (For sale only.) Vol. 14, No. 1. July 1, 1918. Contents: True Nature of Spinach-Blight and the Relation of Insects to Its Transmission. (of Va.-Norfolk-3) By J. A. McClintock and Loren B. Smith.—Influence of Gypsum upon the Solubility of Potash in Spoils. (of Minn.-29) By Paul R. McMiller. Pp. 1-66, pls. 12. Price, 30 cents.

Same, Vol. 14, No. 2. July 8, 1918. Contents: Correlation between the Percentage of Fat in Cow's Milk and the Yield. (of Ill.-7) By Elmer Roberts.—Contribution to the Knowledge of Toxoptera graminum in the South. (of K-68) By Philip Luginbill and A. H. Beyer.—Can Biologic Forms of Stemrust on Wheat Change Rapidly Enough to Interfere with Breeding for Rust Resistance? (of Minn.-31) By E. C. Stakman, John H. Parker, and F. J. Piemeisel. Pp. 67-123, pls. 6, figs. 10. Price, 20 cents.

Same, Vol. 14, No. 3. July 15, 1918. Contents: Mineral Content of Southern Poultry Feeds and Mineral Requirement of Growing Fowls. (of N. C.-11) By B. F. Kaupp.—Female Lepidoptera at Light Traps. (of K-68) By W. B. Turner. Pp. 125-149, pl. 1. Price, 10 cents.

Same, Vol. 14, No. 4. July 22, 1918. Contents: A Comparative Study of Salt Requirements for Young and for Mature Buckwheat Plants in Solution Cultures. (of N. J.-) By John W. Shive and William H. Martin.—Composition and Digestibility of Sudan-Grass Hay. (of Iowa-6) By W. G. Gaessler and A. C. McCandlish.—Water-Holding Capacities of Bedding Materials for Live Stock, Amounts Required to Bed Animals, and Amounts of Manure Saved by their Use. (of Ill.-8) By J. W. Whisenand. Pp. 151-190, figs. 3. Price, 10 cents.

Same. Vol. 14, No. 5. July 29, 1918. Contents: Two Important Introduced Parasites of the Brown-Tail Moth (on -K 69). By C. F. W. Muesebeck.—A Hitherto-Unreported Disease of Okra (of G-148). By L. L. Harter.—Potato-Stem Lesions. (of G-149) By H. A. Edson and M. Shapovalov. Pp. 191-220, pls. 8, figs. 3. Price, 15 cents.

~~Note~~.—Beginning with volume 5 the Journal of Agricultural Research has been issued weekly and is distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication, the price being \$3 per year, 52 numbers.

Experiment Station Record. Vol. 38, No. 7, May, 1918. E. W. Allen, Ph. D., Editor. Pp. 601-700. Price, 15 cents.

~~Note~~.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, 10 numbers each, at \$1 a volume.

The Monthly Crop Report. Vol. 4, No. 7. July, 1918. Pp. 69-84. (Bureau of Crop Estimates.)

Contains data relating to agriculture, including estimates of acreage, conditions, yield, prices, and value of crops and live stock. For free distribution.

MISCELLANEOUS.

The Bat Guanos of Porto Rico and Their Fertilizing Value. By P. L. Gile, Chemist. Pp. 66. July 8, 1918. (Bulletin 25, Porto Rico Agricultural Experiment Station.) Price, 10 cents.

Inventory of Seeds and Plants Imported by the Office of Foreign Seed and Plant Introduction, during the period from July 1 to September 30, 1918. Pp. 71, pls. 11. July 26, 1918. (Inventory No. 44: Nos. 40896 to 41314. Bureau of Plant Industry.) Price, 15 cents.

Food Needs for 1919. Fall-Sown Wheat and Rye. Pp. 13. (Circular 108, Office of the Secretary.)

Part of Agricultural program for the period beginning with the autumn of 1918.

General Regulations Governing Licensees Operating Stock Yards, or Handling or Dealing in Live Stock in or in Connection with Stock Yards. Pp. 14. July 26, 1918. (Circular 116, Office of the Secretary.) Price, 5 cents.

SERVICE AND REGULATORY ANNOUNCEMENTS—FOR SALE ONLY.

~~All~~ These contain *only* information, instructions, and notices governing the enforcement of food and drugs act, meat inspection, 28-hour, and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. *Free distribution* is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale *only*, at prices noted.

Bureau of Animal Industry. No. 133. May, 1918. Pp. 33–38. July 9, 1918. Price, 5 cents.

Biological Survey. No. 21. Pp. 2. July 1, 1918. Price, 5 cents.

Bureau of Chemistry. Supplement, No. 52. [N. J. 6051–6100.] Pp. 55–109. July 3, 1918. Price, 10 cents.

Federal Horticultural Board. No. 52. May, 1918. Pp. 53–63. June 28, 1918. Price, 5 cents.

Bureau of Markets. No. 36. Pp. 16, figs. 10. June 21, 1918. Price, 5 cents.

SOIL SURVEYS.

~~All~~ All requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

Soil Survey of Jasper County, Georgia. By David D. Long, of the Georgia State College, and M. Earl Carr, of the U. S. Department of Agriculture. Pp. 43, fig. 1, map. (From F. O. Soils, 1916.) Price, 15 cents.

Soil Survey of Mitchell County, Iowa. By W. E. Tharp, of the U. S. Department of Agriculture, and Knute Espe, of the Iowa Agricultural Experiment Station. Pp. 34, fig. 1, map. (From F. O. Soils, 1916.) Price, 15 cents.

Soil Survey of Box Butte County, Nebraska. By F. A. Hayes, of the Nebraska Soil Survey, and J. H. Agee, of the U. S. Department of Agriculture. Pp. 34, pl. 1, fig. 1, map. (From F. O. Soils, 1916.) Price, 15 cents.

Soil Survey of Yates County, New York. By E. T. Maxon. Pp. 36, fig. 1, map. (From F. O. Soils, 1916.) Price, 15 cents.

SEPARATES.

National and State Live-Stock Associations and Allied Organizations. Compiled in the Bureau of Animal Industry. Pp. 10. (Separate 742, Yearbook, 1917.) Price, 5 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

~~All~~ Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. (For sale only.) Vol. 46, No. 4. April, 1918. [June 29, 1918.] Pp. 163–206, charts 9, figs. 4. Price, 25 cents per copy, \$2.50 per year. Payable to the Superintendent of Documents.

Special articles: Solar and sky radiation during April, 1918. By I. F. Hand.—Absorption and radiation of the solar atmosphere. By S. Hirayama.—Halo of April 14, 1918, at Columbus. By H. H. Martin.—Inferior arc of the 46° halo, April 25, 1918. By J. L. Vesper.—Elliptical halos of vertical major axis. By J. B. Dale.—Real velocities of meteors. By Charles P. Olivier.—Visible weather (Chinook?). By R. T. Pound.—Observations connected with the eclipse of June 8, 1918. By H. H. Kimball and S. P. Fergusson.

National Weather and Crop Bulletin. Nos. 16, 17, 18, 19, 20. July, 1918, reporting temperature, rainfall, and crop conditions throughout the United States. Issued weekly, on Wednesday, April to October; monthly remainder of year. Price, 25 cents a year.

EDWY B. REID,
Chief, Division of Publications.

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This circular will be sent regularly to all who apply for it.

United States Department of Agriculture,

WASHINGTON, D. C., August 31, 1918.

MONTHLY LIST OF PUBLICATIONS.

[AUGUST, 1918.]

READ CAREFULLY BEFORE ORDERING.

~~DO~~ Send no remittances to the U. S. Department of Agriculture.

A copy of any of the publications listed herein, except those otherwise noted, may be obtained free upon application to the Chief of the Division of Publications, United States Department of Agriculture, Washington, D. C., as long as the department's supply lasts.

After this department's supply is exhausted, publications can still be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., but by purchase only, and at the prices noted herein.

~~DO~~ Send all remittances to the Superintendent of Documents direct. His office is not a part of the Department of Agriculture.

FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

~~DO~~ Note.—The department's supply of the current numbers of Farmers' Bulletins is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy.

The Soy Bean: Its Culture and Uses. By W. J. Morse, Scientific Assistant, Forage-Crop Investigations. Pp. 32, figs. 15. Contribution from the Bureau of Plant Industry. (Farmers' Bulletin 973.)

For general distribution.

Clearing Land. By Earl D. Strait, Scientific Assistant. Pp. 30, figs. 13. Contribution from the Office of Farm Management. (Farmers' Bulletin 974.)
Suitable for general distribution.

Cooling Milk and Cream on the Farm. By J. A. Gamble, Dairy Division. Pp. 16, figs. 8. Contribution from the Bureau of Animal Industry. (Farmers' Bulletin 976.)

Suitable for general distribution.

Larkspur or Poison Weed. By C. Dwight Marsh and A. B. Clawson, Physiologists, and Hadleigh Marsh, Veterinary Inspector. Pp. 15, figs. 6. Contribution from the Bureau of Animal Industry. (Farmers' Bulletin 988.)

A revision of Farmers's Bulletin 531, and of interest to cattle raisers on mountain ranges in the western states.

Timothy. By Morgan W. Evans, Scientific Assistant, Office of Forage Crop Investigations. Pp. 28, figs. 8. Contribution from the Bureau of Plant Industry. (Farmers' Bulletin 990.)

A treatise on the growing and handling of this hay and suitable for general distribution.

The Use of Machinery in Cutting Corn. By H. R. Tolley, Scientific Assistant. Pp. 16, figs. 6. Contribution from the Office of Farm Management. **Farmers' Bulletin 992.**)

This bulletin discusses the corn binder and the platform harvester, points out the conditions under which they may be used to the best advantage, and gives the disadvantages of their use as well.

Saving Farm Labor by Harvesting Crops with Live Stock. By J. A. Drake, Agriculturist. Pp. 15, figs. 22. Contribution from the Office of Farm Management. **(Farmers' Bulletin 1008.)**

This bulletin points out, largely by pictures of actual farm practices, some of the advantages of keeping live stock and of using the hogs, sheep and beef cattle to help harvest and market farm crops.

DEPARTMENTAL BULLETINS—TECHNICAL.

¶ The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information, as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

Experiments With Single-Stalk Cotton Culture in Louisiana, Arkansas, and North Carolina. By P. V. Cardon, Assistant Agronomist. Pp. 31. Contribution from the Bureau of Plant Industry. **(Professional Paper.)** August 28, 1918. **(Department Bulletin 526.)** Price, 5 cents.

Of interest to cotton growers.

Miscellaneous Conifers of the Rocky Mountain Region. By George B. Sudworth, Dendrologist. Pp. 45, pls. 13, maps 9. Contribution from the Forest Service. **(Professional Paper.)** August 14, 1918. **(Department Bulletin 680.)** Price, 20 cents.

Deals with the larch, hemlock, false-hemlock, incense cedar, arborvitæ, and yew trees within the Rocky Mountain Region.

Utilization of Elm. By W. D. Brush, Scientific Assistant. Pp. 43, pls. 4, figs. 8. Contribution from the Forest Service. July 29, 1918. **(Department Bulletin 683.)** Price, 10 cents.

Describes the commercial species and the characteristics of this wood and gives classified uses of same in different wood-using industries.

The Sources of Apple Bitter-Rot Infections. By John W. Roberts, Pathologist, Fruit-Disease Investigations. Pp. 26, pls. 5. Contribution from the Bureau of Plant Industry. **(Professional Paper.)** August 19, 1918. **(Department Bulletin 684)** Price, 10 cents.

Of interest to apple growers, especially in the South.

Typical Specifications for Nonbituminous Road Materials. By Prevost Hubbard, Chemical Engineer, and Frank H. Jackson, jr., Assistant Testing Engineer. Pp. 40, figs. 3. Contribution from the Bureau of Public Roads. **(Professional Paper.)** August 30, 1918. **(Department Bulletin 704.)** Price, 5 cents.

Of interest to road contractor and engineers.

Results of Experiments With Miscellaneous Substances Against Bed-bugs, Cockroaches, Clothes Moths, and Carpet Beetles. By E. W. Scott, Entomologist, and W. S. Abbott and J. E. Dudley, Jr., Scientific Assistants, Bureau of Entomology. **(Professional Paper.)** August 26, 1918. **(Department Bulletin 707.)** Price, 5 cents.

Of interest to those engaged in the manufacture and sale of insecticides.

Spoilage of Cranberries After Harvest. By C. L. Shear and Neil E. Stevens, Pathologists, and R. B. Wilcox and B. A. Rudolph, Scientific Assistants, Fruit-Disease Investigations. Pp. 20. Contribution from the Bureau of Plant Industry. **(Professional Paper.)** August 9, 1918. **(Department Bulletin 714.)** Price, 5 cents.

Of interest to growers of and dealers in cranberries generally.

Attracting Birds to Public and Semipublic Reservations. By W. L. McAtee, Assistant Biologist. Pp. 13, figs. 4. Contribution from the Bureau of Biological Survey. August 12, 1918. **(Department Bulletin 715.)** Price, 5 cents.

For general distribution among organizations and individuals interested in the protection of wild birds. Of especial value to those in charge of parks, cemeteries, and other public and semipublic reservations.

The Pink Bollworm With Special Reference to Steps Taken by the Department of Agriculture to Prevent Its Establishment in the United States. By W. D. Hunter, In Charge of Southern Field Crop Insect Investigations and Member of the Federal Horticultural Board. Pp. 27, figs. 10. Contribution from the Bureau of Entomology and the Federal Horticultural Board. August 30, 1918. (Department Bulletin 723.) Price, 5 cents.

Of interest to cotton growers and importers generally.

Length of Cotton Lint, Crops 1916 and 1917. By W. L. Pryor, Cotton-Crop Specialist. Pp. 8. Contribution from the Bureau of Crop Estimates. September 6, 1918. (Department Bulletin 733.) Price, 5 cents.

Of interest to cotton growers and buyers.

MISCELLANEOUS.

A Serious Eelworm or Nematode Disease of Wheat. Pp. 7. Contribution from the Bureau of Plant Industry. July 26, 1918. (Circular 114, Office of the Secretary.)

Finding Labor to Harvest the Food Crops. By G. I. Christie, Assistant to the Secretary. Pp. 8. August 2, 1918. (Circular 115, Office of the Secretary.)

A statement showing what the department is doing to increase the supply of farm labor.

Use Corn Meal and Corn Fleur to Save Wheat. Pp. 4. Contribution from the States Relations Service. August 14, 1918. (Circular 117, Office of the Secretary.)

Use Oats to Save Wheat. Pp. 4. Contribution from the States Relations Service. August 14, 1918. (Circular 118, Office of the Secretary.)

Use Rice Flour to Save Wheat Pp. 4. Contribution from the States Relations Service. August 14, 1918. (Circular 119, Office of the Secretary.)

SERIALS.

Journal of Agricultural Research. (For sale only.) Vol. 14, No. 6, August 5, 1918. Contents: Anatomy of the Potato Plant, with Special Reference to the Ontogeny of the Vascular System. (op G-150.) By Ernst F. Art-schwager.—Improved Methods of Immunization Against Symptomatic Anthrax (Blackleg). (oq A-40.) By R. A. Kelser.—Concentration of Symptomatic Anthrax (Blackleg) Toxin. (or A-41.) By William N. Berg. Pp. 221-264, pls. 21, figs. 4. Price, 30 cents.

Same, Vol. 14, No. 7, August 12, 1918. Contents: Soil Reaction and the Growth of Azotobacter. (ot Kans. 14.) By. P. L. Gainey.—Effect of Different Oxygen Pressures on the Carbohydrate Metabolism of the Sweet Potato. (ou G-151.) By Heinrich Hasselbring. Pp. 265-284. Price, 10 cents.

Same, Vol. 14, No. 8, August 19, 1918. Contents: Influence of Humidity Upon the Strength and the Elasticity of Wool Fiber. (ov Wyo.-2.) By J. I. Hardy.—Availability of Potash in Some Common Soil-Forming Minerals and Effect of Lime Upon Potash Absorption by Different Crops. (os N. C.-12.) By J. K. Plummer.—Influence of Reaction on Nitrogen-Assimilating Bacteria. (ow Wis.-13.) By E. B. Fred and Aubrey Davenport. Pp. 285-336, pls. 2, figs. 7. Price, 10 cents.

Same, Vol. 14, No. 9, August 26, 1918. Contents: Susceptibility and Resistance to Citrus-Canker of the Wild Relatives, Citrus Fruits, and Hybrids of the Genus Citrus. (oy Ala. 4.) By George L. Peltier.—Variation and Correlation in Wheat, with Special Reference to Weight of Seeds Planted. (oz Minn.-32.) By A. C. Arny and R. J. Garber.—Obtaining Beet Leafhoppers Nonvirulent as to Curly-Top. (pd K-70.) By C. F. Stahl and Eubanks Carsner. Pp. 337-394, pls. 4, figs. 8. Price, 10 cents.

NOTE.—Beginning with volume 5 the Journal of Agricultural Research has been issued weekly and is distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. *It will not be sent free to individuals.* The Superintendent of Documents will receive subscriptions for this publication, the price being \$3 per year, 52 numbers.

Experiment Station Record. Vol. 38, No. 8, June, 1918. E. W. Allen, Ph. D., Editor. Pp. 701-800. Price, 15 cents.

Same, Vol. 38, No. 9. Abstract number. Pp. 801-900. Price, 15 cents.

NOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, 10 numbers each, at \$1 a volume.

The Monthly Crop Report Vol. 4, No. 8, August, 1918. Pp. 85-100. (Bureau of Crop Estimates.)

Contains data relating to agriculture, including estimates of acreage, conditions, yield, prices, and value of crops and live stock. For free distribution.

SERVICE AND REGULATORY ANNOUNCEMENTS—FOR SALE ONLY.

These contain *only* information, instructions, and notices governing the enforcement of food and drugs act, meat inspection, 28-hour, and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. *Free distribution* is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for same *only*, at prices noted.

Bureau of Animal Industry. No. 134. Pp. 39-52. Aug. 6, 1918. Price, 5 cents.

Bureau of Biological Survey. No. 22. Pp. 3. Aug. 21, 1918. Price, 5 cents.

Bureau of Biological Survey. No. 23. Migratory Bird Treaty, Act, and Regulations. Pp. 12. Aug. 26, 1918. Price, 5 cents.

Bureau of Chemistry. Supplement No. 53. [N. J. 6101-6150.] Pp. 111-175. Aug. 3, 1918. Price, 10 cents.

Bureau of Chemistry. Supplement No. 54. [N. J. 6151-6200.] Pp. 177-238. Aug. 21, 1918. Price, 10 cents.

Federal Horticultural Board. No. 53. Pp. 63-69. Aug. 7, 1918. Price, 5 cents.

Bureau of Markets. No. 37. Pp. 82. Aug. 26, 1918. Price, 5 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. (For sale only.) Vol. 46, No. 5, May, 1918. [Aug. 1, 1918.] Pp. 207-264, charts 9, figs. 20. Price, 25 cents per copy, \$2.50 per year. Payable to the Superintendent of Documents.

Special articles: Solar and sky radiation measurements during May, 1918. By H. H. Kimball.—Halo observations at York, N. Y., 1917. By Milroy N. Stewart.—Weather Bureau an aid to aviation and artillery services.—Diurnal variation of wind with height (in France), Dunoyer and Reboul.—Phenomena connected with turbulence in the lower atmosphere. By G. I. Taylor.—Acoustics of the atmosphere. By E. Schrodinger.—Diurnal variation of atmospheric electric potential in clear weather. By A. B. Chauveau.—Tornado of May 9, 1918, Pearl Rock to Calmar, Iowa. By H. P. Hardin.—Meteorology in Norway for 50 years.—Frequency of snow in Tripoli and Algeria. By F. Eredia.—Spring of 1918 in the British Isles.—Rainfall in Mysore, 1916.

Monthly Weather Review. Supplement No. 10. Aerology No. 5. Free-Air Data at Drexel Aerological Station. January-June, 1917. By W. R. Gregg and others. Pp. 101, figs. 4. Price, 25 cents.

National Weather and Crop Bulletin. Nos. 21, 22, 23, 24, August, 1918, reporting temperature, rainfall, and crop conditions throughout the United States. Issued weekly, on Wednesday, April to October; monthly remainder of year. Price, 25 cents a year.

EDWY B. REID,
Editor and Chief, Division of Publications.

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United States Department of Agriculture,

WASHINGTON, D. C., September 30, 1918.

MONTHLY LIST OF PUBLICATIONS.

[SEPTEMBER, 1918.]

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FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

~~g~~ NOTE.—The department's supply of the current numbers of Farmers' Bulletin is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy.

Controlling the Garden Webworm in Alfalfa Fields. By E. O. Kelly, Entomological Assistant, and T. S. Wilson, Scientific Assistant, Cereal and Forage Insect Investigations. Pp. 7, figs. 3. Contribution from the Bureau of Entomology. (**Farmers' Bulletin 944.**) Of interest to alfalfa growers generally.

Important Poultry Diseases. By D. E. Salmon. Revised, with additions by Bernard A. Gallagher and W. D. Foster. Pp. 48, figs. 11. Contribution from the Bureau of Animal Industry. (**Farmers' Bulletin 957.**)

A revision of Farmers' Bulletin 530 and suitable for general distribution.

Systems of Hog Farming in the Southeastern States. By E. S. Haskell, Assistant Agriculturist. Pp. 40, figs. 12. Contribution from the Office of Farm Management. (**Farmers' Bulletin 985.**)

Tells how the more successful hog growers of this region fit hog raising into their farming systems, and outlines an elastic grazing plan, designed to provide for ten sows and their pigs without entailing much expense for costly concentrates.

The Preparation of Bees for Outdoor Wintering. By E. F. Phillips, Apiculturist, and George S. Demuth, Apicultural Assistant. Pp. 24, figs. 6. Contribution from the Bureau of Entomology. (**Farmers' Bulletin 1012.**) Suitable for general distribution.

DEPARTMENTAL BULLETINS—TECHNICAL.

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Highway Cost Keeping. By James J. Tobin and A. R. Losh, U. S. Engineer Economists. Pp. 52, figs. 9. Contribution from the Office of Public Roads. Sept. 12, 1918. (**Department Bulletin 660.**) Price, 10 cents. Of interest to public road officials and highway engineers.

Geographical Phases of Farm Prices: Corn. By L. B. Zapoleon, formerly of the Division of Crop Records. Pp. 53, figs. 7, maps 3. Contribution from the Bureau of Crop Estimates. Sept. 26, 1918. (**Department Bulletin 696.**) Price, 10 cents.

Shows the difference in values and of the costs of production of corn in the various producing sections.

Citrus-Fruit Improvement: A Study of Bud Variation in the Marsh Grapefruit. By A. D. Shamel, Physiologist in Charge, L. B. Scott, Pomologist, and C. S. Pomeroy, Assistant Pomologist, Office of Horticultural and Pomological Investigations. Pp. 112, pls. 11, figs. 14. Contribution from the Bureau of Plant Industry. Sept. 27, 1918. (**Department Bulletin 697.**) Price, 20 cents.

Of interest to commercial growers of grapefruit.

- The Chemical Analysis of Wheat-Flour Substitutes and of the Breads Made Therefrom.** By J. A. Le Clerc, Chemist in Charge, and H. L. Wessling, Assistant Chemist, Plant Chemical Laboratory. Pp. 12, pls. 7. Contribution from the Bureau of Chemistry. Sept. 20, 1918. (**Department Bulletin 701.**) Price, 5 cents.
Gives the results of the analysis of more than 30 part substitutes for wheat flour and the bread made from them.
- Efficiency of Commercial Egg Candling.** By M. K. Jenkins, Assistant Bacteriologist, and C. A. Bengston, Investigator in Egg Handling. Pp. 22, figs. 2. Contribution from the Bureau of Chemistry. Sept. 12, 1918. (**Department Bulletin 702.**) Price, 5 cents.
Of interest to wholesale and retail dealers in eggs.
- Shuck Protection for Ear Corn.** By C. H. Kyle, Assistant Physiologist, Office of Corn Investigations. Pp. 16, figs. 3. Contribution from the Bureau of Plant Industry. (**Professional Paper.**) Sept. 18, 1918. (**Department Bulletin 708.**) Price, 5 cents.
Result of investigations regarding the merits of shucks as a means of preventing ear damage.
- Stagger Grass (*Chrysopera Maseotoxicum*) as a Poisonous Plant.** By C. Dwight Marsh and A. B. Clawson, Physiologists, and Hadleigh Marsh, Veterinary Inspector. Pp. 14, figs. 8. Contribution from the Bureau of Animal Industry. (**Professional Paper.**) Sept. 13, 1918. (**Department Bulletin 710.**) Price, 5 cents.
Gives description and characteristics of the plant, and suggests remedial measures for counteracting its effects on animals.
- A Five-Year Farm Management Survey in Palmer Township, Washington County, Ohio, 1912-1916.** By H. W. Hawthorne, Scientific Assistant. Pp. 53, pls. 2, figs. 13. Contribution from the Office of Farm Management. (**Professional Paper.**) Sept. 26, 1918. (**Department Bulletin 716.**) Price, 10 cents.
A study of a farm-management survey of 73 southeastern Ohio hill farms, and contains valuable suggestions to farmers located on the numerous similar areas of Pa., Ohio, Ind., Ill., W. Va., and Ky.
- Digestibility of Protein Supplied by Soy-Bean and Peanut Press-Cake Flours.** By Arthur D. Holmes, Specialist in Charge of Digestion Experiments, Office of Home Economics. Pp. 28. Contribution from the States Relations Service. (**Professional Paper.**) Sept. 25, 1918. (**Department Bulletin 717.**) Price, 5 cents.
Records studies of the digestibility of protein supplied by soy-bean and peanut press-cake flours. It is primarily of interest to students and investigators of food problems.
- Women's Rural Organizations and Their Activities.** By Anne M. Evans, Investigator in Women's Rural Organizations. Pp. 15, figs. 3. Contribution from the Bureau of Markets. Aug. 29, 1918. (**Department Bulletin 719.**) Price, 5 cents.
For general distribution.
- A Method for Preparing a Commercial Grade of Calcium Arsenate.** By J. K. Haywood, Chief, Miscellaneous Division, Insecticide and Fungicide Board, and C. M. Smith, Assistant Chemist. Pp. 10. Contribution from the Bureau of Chemistry and the Insecticide and Fungicide Board. (**Professional Paper.**) Oct. 5, 1918. (**Department Bulletin 750.**) Price, 5 cents.
Of interest to manufacturers of insecticides and fungicides.

MISCELLANEOUS.

- The Work of the Huntley Reclamation Project Experiment Farm in 1917.** By Dan Hansen, Farm Superintendent. Pp. 29, fig. 1. September, 1918. (**W. I. A. Cir. 22,** Bureau of Plant Industry.)
- The Work of the San Antonio Experiment Farm in 1917.** By C. R. Lettier, Farm Superintendent. Pp. 28, figs. 4. September, 1918. (**W. I. A. Cir. 21,** Bureau of Plant Industry.)
- The Rice Rats of North America.** By Edward A. Goldman, Assistant Biologist, Biological Survey. Pp. 100, pls. 6, figs. 11. Sept. 23, 1918. (**North American Fauna No. 43.**) Price, 20 cents.
- Report of the Porto Rico Agricultural Experiment Station, 1917.** Pp. 40, pls. 4. Sept. 20, 1918. Price, 10 cents.

SERIALS.

- Journal of Agricultural Research.** (For sale only.) Vol. 14, No. 10, September 2, 1918. Contents: Acidity of Silage Made from Forage Crops. (pa Idaho-1.) By Ray E. Neidig.—Pinon Blister-Rust. (pb G-152.) By George G. Hedgecock, Ellsworth Bethel, and N. Rex Hunt.—Comparative Toxicity of Cottonseed Products. (pc N. C.-13.) By W. A. Withers and F. E. Carruth. Pp. 395-452, pls. 4, figs. 6. Price, 15 cents.
- Same, Vol. 14, No. 11. Sept. 9, 1918. Contents: Variations in the Moisture Content of the Surface Foot of a Loess Soil as Related to the Hygroscopic Coefficient. (pe Nebr.-2.) By Frederick J. Alway and Guy R. McDole.—Subsoiling, Deep Tilling, and Soil Dynamiting in the Great Plains. (pf G-153.) By E. C. Chilcott and John S. Cole.—Overwintering of the Citrus-Canker Organism in the Bark Tissue, of Hardy Citrus Hybrids. (pg Ala.-5.) By George L. Peltier and David C. Neal. Pp. 453-524, pl. 1, figs. 8. Price, 15 cents.
- Same, Vol. 14, No. 14. Dec. 31, 1917 [September, 1918]. Contents and Index to Volume 14. Pp. xvii, 717-727. Price, 5 cents.
- NOTE.**—Beginning with volume 5 the Journal of Agricultural Research has been issued weekly and is distributed free only to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication, the price being \$8 per year, 52 numbers.

Experiment Station Record. Vol. 39, No. 1, July, 1918. E. W. Allen, Ph. D., Editor. Pp. 1-100. Price, 15 cents.

Same, Vol. 39, No. 2. August, 1918. Pp. 101-200. Price, 15 cents.

NOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, 10 numbers each, at \$1 a volume.

The Monthly Crop Report. Vol. 4, No. 9, September, 1918. Pp. 101-116. (Bureau of Crop Estimates.)

Contains data relating to agriculture, including estimates of acreage, conditions, yield, prices, and value of crops and live stock. For free distribution.

SERVICE AND REGULATORY ANNOUNCEMENTS—FOR SALE ONLY.

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Bureau of Animal Industry. No. 135. Pp. 53-59. Sept. 23, 1918. Price, 5 cents.

Bureau of Animal Industry. No. 136. Pp. 61-67. Sept. 30, 1918. Price, 5 cents.

Bureau of Chemistry. Index to Nos. 1 to 22. 1918. Pp. 34. Oct. 7, 1918. Price, 5 cents.

Federal Horticultural Board. No. 54. Pp. 71-78. Sept. 18, 1918. Price, 5 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Daily River Stages at River Gage Stations on the Principal Rivers of the United States. Vol. 15 for the Year 1917. By Alfred J. Henry, Meteorologist. Pp. 286. Price, 50 cents.

National Weather and Crop Bulletin. Nos. 25, 26, 27, 28, September, 1918, reporting temperature, rainfall, and crop conditions throughout the United States. Issued weekly, on Wednesday, April to October; monthly remainder of year. Price, 25 cents a year.

EDWY B. REID,
Chief, Division of Publications.

HOW WOOD COMPARES WITH COAL IN HEATING VALUE.

In heating value one standard cord of well-seasoned hickory, oak, beech, birch, hard maple, ash, elm, locust, or cherry wood is approximately equal to 1 ton (2,000 pounds) of anthracite coal, according to estimates by the Forest Service, United States Department of Agriculture. However, a cord and a half of soft maple and 2 cords of cedar, poplar, or basswood are required to give the same amount of heat.

One cord of mixed wood, well seasoned, equals in heating value at least 1 ton of average-grade bituminous coal.

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United States Department of Agriculture,

WASHINGTON, D. C., October 31, 1918.

MONTHLY LIST OF PUBLICATIONS.

[OCTOBER, 1918.]

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FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

¶ Note.—The department's supply of the current numbers of Farmers' Bulletins is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy.

Eradication of Bermuda Grass. By Albert A. Hansen, Scientific Assistant, Office of Forage-Crop Investigations. - Pp. 11, figs. 2. Contribution from the Bureau of Plant Industry. (**Farmers' Bulletin 945.**)

For distribution in the southern part of the United States.

Horse Beans. By Roland McKee, Assistant Agrostologist, Forage-Crop Investigations. Pp. 16, figs. 5. Contribution from the Bureau of Plant Industry. (**Farmers' Bulletin 969.**)

Suitable for distribution in the South Atlantic, Gulf, and Pacific Coast States.

Control of the Green Clover Worm in Alfalfa Fields. By Charles C. Hill, Scientific Assistant, Cereal and Forage Insect Investigations. Pp. 6, figs. 6. Contribution from the Bureau of Entomology. (**Farmers' Bulletin 982.**)

Especially suitable for distribution in the eastern half of the United States.

Cooperative Bull Associations. By Joel G. Winkler, Dairy Division. Pp. 35, figs. 7. Contribution from the Bureau of Animal Industry. (**Farmers' Bulletin 993.**)

For general distribution.

Preventing Wood Rot in Pecan Trees. By S. M. McMurrin, Assistant Pathologist. Pp. 8, figs. 10. Contribution from the Bureau of Plant Industry. (**Farmers' Bulletin 995.**)

A warning to growers of pecan trees regarding this trouble, which is caused by careless pruning and cultivation.

Crop Systems for Arkansas. By A. D. McNair, Agriculturist. Pp. 24, fig. 1. Contribution from the Office of Farm Management. (**Farmers' Bulletin 1000.**)

Cropping systems suggested for Arkansas, northern Louisiana, southeastern Oklahoma, western Tennessee, and northern Mississippi.

The Gas Tractor in Eastern Farming. By Arnold P. Yerkes, Agriculturist, and L. M. Church, Assistant in Farm Accounting. Pp. 32, figs. 3. Contribution from the Office of Farm Management. (**Farmers' Bulletin 1004.**)

A summary of the experiences of New York State farmers with tractors, and should help every farmer to decide whether or not a tractor would prove profitable to him.

The Wheat Jointworm and Its Control. By W. J. Phillips, Entomological Assistant, Cereal and Forage Insect Investigations. Pp. 14, figs. 17. Contribution from the Bureau of Entomology. (**Farmers' Bulletin 1006.**)

For general distribution.

Game Laws for 1918. A Summary of the Provisions of Federal, State, and Provincial Statutes. By George A. Lawyer and Frank L. Earnshaw. Pp. 70. Contribution from the Bureau of Biological Survey. (**Farmers' Bulletin 1010.**)

For general distribution.

Wintering Bees in Cellars. By E. F. Phillips, Apiculturist, and George S. Demuth, Apicultural Assistant. Pp. 24, figs. 3. Contribution from the Bureau of Entomology. (**Farmers' Bulletin 1014.**)

For general distribution.

DEPARTMENTAL BULLETINS—TECHNICAL.

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Potatoes: Acreage, Production, Foreign Trade, Supply, and Consumption. By George K. Holmes, Division of Crop Records. Pp. 24. Contribution from the Bureau of Crop Estimates. Oct. 16, 1918. (**Department Bulletin 695.**) Price, 5 cents.

This bulletin contains information which is of interest to the public at large as well as to those who are especially interested in potato production, trade, and consumption.

Grain-Sorghum Experiments in the Panhandle of Texas. By Carleton R. Ball and Benton E. Rothgeb, Office of Cereal Investigations. Pp. 91, figs. 13. Contribution from the Bureau of Plant Industry. (**Professional Paper.**) Oct. 31, 1918. (**Department Bulletin 698.**) Price, 15 cents.

Of interest to farmers in the section noted, and also in sections where climatic conditions are similar.

Analysis of Experimental Work With Ground Raw Rock Phosphate as a Fertilizer. By W. H. Waggaman and C. R. Wagner, Scientists in Investigation of Fertilizer Resources, and R. F. Gardiner, Scientist in Soil Laboratory Investigations. Pp. 119. Contribution from the Bureau of Soils. Oct. 16, 1918. (**Department Bulletin 699.**) Price, 10 cents.

A summary of results of experiments with ground raw phosphate rock as a fertilizer.

Climate and Plant Growth in Certain Vegetative Associations. By Arthur W. Sampson, Plant Ecologist. Pp. 72, figs. 37. Contribution from the Forest Service. (**Professional Paper.**) Oct. 14, 1918. (**Department Bulletin 700.**) Price, 15 cents.

Results of a series of experiments undertaken to obtain a comparison of the climatic requirements of the main plant types, and are of value both in experimental and in practical agriculture and forestry.

Apple Powdery Mildew and Its Control in the Arid Regions of the Pacific Northwest. By D. F. Fisher, Assistant Pathologist, Fruit-Disease Investigations. Pp. 27, pls. 3, figs. 2. Contribution from the Bureau of Plant Industry. (**Professional Paper.**) Oct. 29, 1918. (**Department Bulletin 712.**) Price, 10 cents.

Of interest to apple growers in the territory noted.

A Study of Farming in Southwestern Kentucky. By J. H. Arnold, Agriculturist. Pp. 19. Contribution from the Office of Farm Management. (Professional Paper.) Oct. 9, 1918. (**Department Bulletin 713.**) Price, 5 cents.

A study of 342 farms showing factors which make some farms more successful than others.

A Preliminary Study of the Bleaching of Oats With Sulphur Dioxid. By George H. Baston, Assistant Grain Supervisor. Pp. 11, figs. 3. Contribution from the Bureau of Markets. Oct. 22, 1918. (**Department Bulletin 725.**) Price, 5 cents.

Results of laboratory experiments with oats before and after bleaching. Of interest to chemists generally.

MISCELLANEOUS.

Rules and Regulations of the Secretary of Agriculture Under the Food Products Inspection Law of October 1, 1918. Pp. 8. Oct. 4, 1918. (**Circular 120, Office of the Secretary.**) Price, 5 cents.

Handling the 1918 Wheat Harvest in Kansas. By Edward C. Johnson, Dean, Division of College Extension, Kansas State Agricultural College. Pp. 7. October, 1918. (**Circular 121, Office of the Secretary.**) Price, 5 cents.

Labor Saving in Live-Stock Production. By George M. Rommel, Chief, Animal Husbandry Division. Pp. 14, figs. 6. Contribution from the Bureau of Animal Industry. Oct. 16, 1918. (**Circular 122, Office of the Secretary.**)

The Work of the Truckee-Carson Reclamation Project Experiment Farm in 1917. By F. B. Headley, Farm Superintendent. Pp. 24, figs. 1. (**W. I. A. Circ. 23, Bureau of Plant Industry.**)

SERIALS.

Journal of Agricultural Research. (For sale only.) Vol. 14, No. 12, Sept. 16, 1918. Contents: Resistance of Seeds to Desiccation. (ph G-154.) By George T. Harrington and William Crocker.—Occurrence of Coccidioidal granuloma (Oidiomycosis) in Cattle. (pn A-43.) By L. T. Giltner.—Tissue Invasion by Plasmodiophora brassicae. (pj G-155.) By L. O. Kunkel. Pp. 525-572, pls. 22, figs. 2. Price, 30 cents.

Same, Vol. 14, No. 13, Sept. 23, 1918. Contents: An Improved Method for Recovering Trypanosomes from the Blood of Rats for Antigen Purposes in Connection with Complement Fixation. (pi A-42.) By F. H. Reynolds and H. W. Schoening.—Life History of *Pemphigus populi-transversus*. (pk K-71.) By Thomas H. Jones and C. P. Gillette.—Stem Lesions Caused by Excessive Heat. (pl G-156.) By Carl Hartley.—Work and Parasitism of the Mediterranean Fruit Fly in Hawaii during 1917. (pm K-72.) By C. E. Pemberton and H. F. Willard.—Corn-Rootrot and Wheatscab. (ps G-157.) By G. N. Hoffer, A. G. Johnson, and D. Atanasoff. Pp. 573-612, pls. 5, fig. 1. Price, 15 cents.

Same, Vol. 15, No. 1, Oct. 7, 1918. Contents: Studies in Inheritance of Certain Characters of Crosses between Dairy and Beef Breeds of Cattle. (po Me-12.) By John W. Gowen. Pp. 1-58, pls. 6. Price, 20 cents.

Same, Vol. 15, No. 2, Oct. 14, 1918. Contents: Condition of Fertilizer Potash Residues in Hagerstown Silty Loam Soil. (pq Pa-8.) By William Frear and E. S. Erb.—Hardening Process in Plants and Development from Frost Injury. (pr G-158.) By R. B. Harvey.—Chemistry of Sweet-Clover Silage in Comparison with Alfalfa Silage. (ps Kans-15.) By C. O. Swanson and E. L. Tague. Pp. 59-132, pls. 4, figs. 6. Price, 20 cents.

~~NOTE.~~—Beginning with volume 5 the Journal of Agricultural Research has been issued weekly and is distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. *It will not be sent free to individuals.* The Superintendent of Documents will receive subscriptions for this publication, the price being \$3 per year, 52 numbers.

The Monthly Crop Report. Vol. 4, No. 10, October, 1918. Pp. 117-132. (Bureau of Crop Estimates.)

Contains data relating to agriculture, including estimates of acreage, conditions, yield, prices, and value of crops and live stock. For free distribution.

SERVICE AND REGULATORY ANNOUNCEMENTS—FOR SALE ONLY.

These contain *only* information, instructions, and notices governing the enforcement of the food and drugs act, meat inspection, 28-hour, and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. Free distribution is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale *only*, at prices noted.

Biological Survey. No. 24. Pp. 1. Oct. 22, 1918. Price, 5 cents.

Bureau of Chemistry. No. 23. Pp. 93–106. Oct. 9, 1918. Price, 5 cents.

Federal Horticultural Board. No. 55. August, 1918. Pp. 79–87. Oct. 31, 1918. Price, 5 cents.

Insecticide and Fungicide Board. No. 21. Pp. 435–450. Oct. 18, 1918. Price, 5 cents.

Bureau of Markets. No. 38. Pp. 24. Oct. 18, 1918. Price, 5 cents.

Bureau of Markets. No. 39. Pp. 4. Oct. 1, 1918. Price, 5 cents.

Bureau of Markets. No. 40. Pp. 4. Oct. 19, 1918. Price, 5 cents.

SOIL SURVEYS.

All requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

Soil Survey of Berkeley County, South Carolina. By W. J. Latimer, F. Z. Hutton, Clarence Lounsbury, A. H. Meyer, and M. Earl Carr. Pp. 42, figs. 2, map. (From *F. O. Soils*, 1916.) Price, 15 cents.

Soil Survey of Door County, Wisconsin. By W. G. Geib and Carl Thompson, of the U. S. Department of Agriculture, and H. V. Geib, of the Wisconsin Geological and Natural History Survey. Pp. 44, fig. 1. (From *F. O. Soils*, 1916.) Price, 15 cents.

Soil Survey of Milwaukee County, Wisconsin. By W. G. Geib, of the U. S. Department of Agriculture, and T. J. Dunnewald, of the Wisconsin Geological and Natural History Survey. Pp. 32, fig. 1. (From *F. O. Soils*, 1916.) Price, 15 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. Vol. 46, No. 7, July, 1918. [Oct. 31, 1918.] Pp. 307–351, charts 9, figs. 14. Price, 25 cents per copy, \$2.50 per year. Payable to the Superintendent of Documents.

Special Articles: Solar and sky radiation measurements during July, 1918; By H. H. Kimball.—Absorption and radiation of the solar atmosphere. By S. Hiyama.—Internal temperatures of the sun. By A. Veronnet.—Halo phenomena observed during July, 1918. By W. R. Gregg.—Report on modes of air motion and the equations of the general circulation of the earth's atmosphere. By G. P. Paine.—Influence of forests upon the melting of snow in the Cascade Range. By A. A. Griffin.—Snowfall on Mount Rainier, Wash. By L. C. Fisher.—On severe winters. By G. Hellmann.

Same, Supplement. No. 11. Aerology, No. 6. Free-Air Data at Drexel Aerological Station, July–December, 1917. By Willis Ray Gregg. Oct. 1, 1918. Pp. 108, figs. 11. Price, 25 cents.

Same, Supplement No. 12. Aerology No. 7. I. Free-Air Data at Drexel, Nebr., and Eliendale, N. Dak., Aerological Stations. January–March, 1918, inclusive. II. Free-Air Temperatures During the Cold Winter of 1917–18. III. The Ellendale Aerological Station. Pp. 82, figs. 10. Price, 25 cents.

National Weather and Crop Bulletin. Nos. 29, 30, 31, 32, 33, October, 1918, reporting temperature, rainfall, and crop conditions throughout the United States. Issued weekly, on Wednesday, April to October; monthly remainder of year. Price, 25 cents a year.

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~~DO~~ NOTE.—The department's supply of the current numbers of Farmers' Bulletins is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy.

Ways of Making Southern Mountain Farms More Productive. By J. H. Arnold, Agriculturist. Pp. 28, figs. 10. Contribution from the Office of Farm Management. (**Farmers' Bulletin 905.**)

This bulletin describes crop rotations for small mountain farms in the southern Alleghenies, and gives complete directions for starting a crop rotation that will make poor mountain land more productive.

Water Systems for Farm Homes. By George M. Warren, Hydraulic Engineer. Pp. 68, figs. 50. Contribution from the Bureau of Public Roads. (**Farmers' Bulletin 941.**) Price, 10 cents.

Suitable for general distribution.

The Spotted Garden Slug. By William H. White, Scientific Assistant, Truck Crop Insect Investigations. Pp. 8, figs. 3. Contribution from the Bureau of Entomology. (**Farmers' Bulletin 959.**)

Suitable for general distribution.

The Spinose Ear Tick and Methods of Treating Infested Animals. By Marion Imes, Zoological Division. Ipp. 8, figs. 4. Contribution from the Bureau of Animal Industry. (**Farmers' Bulletin 980.**)

A brief description of the tick, its life history, and instructions for treating infested animals are given in this bulletin.

Bean and Pea Weevils. By E. A. Back, Entomologist in Charge, and A. B. Duckett, Assistant Entomologist, Stored Product Insect Investigations. Pp. 24, figs. 24. Contribution from the Bureau of Entomology. (**Farmers' Bulletin 983.**)

For general distribution.

Farm Practices that Increase Crop Yields in the Gulf Coast Region. By M. A. Crosby, Agriculturist. Pp. 28, figs. 10. Contribution from the Office of Farm Management. (**Farmers' Bulletin 986.**)

For distribution in the Gulf Coast Region of Alabama, Mississippi, and West Florida.

Steam Sterilization of Seed Beds for Tobacco and Other Crops. By E. B. Beinhart, Assistant in Tobacco Investigations. Contribution from the Bureau of Plant Industry. (**Farmers' Bulletin 996.**)

This bulletin describes the necessary equipment and method of operation, with certain special features of seasonal convenience and seed-bed preparation. The method is applicable for working on either small or large seed-bed areas and can be used in all tobacco-growing districts.

Terracing Farm Lands. By C. E. Ramser, Senior Drainage Engineer. Pp. 40, figs. 37. Contribution from the Bureau of Public Roads. (Farmers' Bulletin 997.) Suitable for general distribution.

Culture of the Logan Blackberry. By George M. Darrow, Scientific Assistant, Fruit-Production Investigations. Pp. 24, figs. 11. Contribution from the Bureau of Plant Industry. (Farmers' Bulletin 998.)

Describes this berry and methods of culture and shows that it is not adapted to the country east of the Cascade and Sierra Ranges.

Hemorrhagic Septicemia. Stockyards Fever, Swine Plague, Fowl Cholera, etc. By Henry J. Washburn, Pathological Division. Pp. 8. Contribution from the Bureau of Animal Industry. (Farmers' Bulletin 1018.) Suitable for general distribution.

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The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information, as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

The Manufacture of Neufchâtel and Cream Cheese in the Factory. By K. J. Matheson and F. R. Cammack, of the Dairy Division. Pp. 28, figs. 4. Contribution from the Bureau of Animal Industry. Nov. 18, 1918. (Department Bulletin 669.) Price, 5 cents.

A description of factors and methods necessary for successful production of these products.

Soils of Southern New Jersey and Their Uses. By J. A. Bonsteel, Scientist in Soil Survey. Pp. 78, figs. 27, maps 3. Contribution from the Bureau of Soils. (Professional Paper.) Oct. 24, 1918. (Department Bulletin 677.) Price, 40 cents.

For distribution in the territory described.

Miscellaneous Truck-Crop Insects in Louisiana. I. Insects Injurious to the Globe Artichoke in Louisiana. II. The Granulated Cutworm, An Important Enemy of Vegetable Crops in Louisiana. III. Experiments in Controlling the Tomato Fruitworm with Arsenicals. By Thomas H. Jones, Entomological Assistant, Truck-Crop Insect Investigations. Pp. 19, pls. 4, figs. 5. Contribution from the Bureau of Entomology. Nov. 20, 1918. (Department Bulletin 703.) Price, 10 cents.

Of interest to truck growers and gardeners in said state.

Reports of Storage Holdings of Certain Food Products. By John O. Bell, Assistant in Market Surveys, and I. C. Franklin, Specialist in Storage. Pp. 44, figs. 23. Contribution from the Bureau of Markets. Nov. 20, 1918. (Department Bulletin 709.) Price, 10 cents.

Of interest to dealers in fruits, meats, and vegetables generally.

The Beet-Sugar Industry in the United States. By C. O. Townsend, Pathologist in Charge, Office of Sugar-Plant Investigations. Pp. 56, pls. 9, figs. 2. Contribution from the Bureau of Plant Industry. Nov. 22, 1918. (Department Bulletin 721.) Price, 15 cents.

A general statement as to the condition of this industry at the present time.

A Study of Heart-Rot in Western Hemlock. By James R. Weir, Forest Pathologist, and Ernest E. Hubert, Scientific Assistant, Office of Investigations in Forest Pathology. Pp. 39, figs. 13. Contribution from the Bureau of Plant Industry. (Professional Paper.) Oct. 22, 1918. (Department Bulletin 722.) Price, 10 cents.

Of interest to lumbermen and contractors generally.

Smyrna Fig Culture. By G. P. Rixford, Physiologist, Crop Physiology and Breeding Investigations. Pp. 48, figs. 12. Contribution from the Bureau of Markets. Nov. 14, 1918. (Department Bulletin 732.) Price, 10 cents.

Describes the origin of this industry, and methods of growing, handling, and curing the Smyrna fig.

Nematode Galls as a Factor in the Marketing and Milling of Wheat. By D. A. Coleman, Scientific Assistant in Grain Standardization, and S. A. Regan, Grain Supervisor. Pp. 16, figs. 7. Contribution from the Bureau of Markets and the Bureau of Plant Industry. Nov. 13, 1918. (Department Bulletin 734.) Price, 5 cents.

A description of this disease, and suggested methods for its control.

Farm Practice in Growing Sugar Beets in the Billings Region of Montana. By S. B. Nuckols, Assistant Agriculturist, Office of Sugar-Plant Investigations, and E. L. Currier, Professor of Farm Management, Montana Agricultural College. Pp. 40, figs. 7. Contribution from the Bureau of Plant Industry. Nov. 15, 1918. (Department Bulletin 735.) Price, 10 cents.

Gives data gathered from 305 farms in the Billings region of Montana showing total hours of labor and other costs of production of beets in 1915.

The Open Shed Compared With the Closed Barn for Dairy Cows. By T. E. Woodward, W. F. Turner, W. R. Hale, and J. B. McNulty, of the Dairy Division. Pp. 15. Contribution from the Bureau of Animal Industry. Nov. 15, 1918. (Department Bulletin 736.) Price, 5 cents.

Of interest to all dairymen.

REPORTS.

- Report of the Secretary of Agriculture, 1918. Pp. 54.
 Reports of the Chief of the Division of Accounts and Disbursements, 1918. Pp. 3.
 Report of the Chief of the Bureau of Animal Industry, 1918. Pp. 63.
 Report of the Chief of the Bureau of Biological Survey, 1918. Pp. 19.
 Report of the Chemist, 1918. Pp. 24.
 Report of the Chief of the Bureau of Crop Estimates, 1918. Pp. 14.
 Report of the Entomologist, 1918. Pp. 24.
 Report of the Acting Chief of the Office of Farm Management, 1918. Pp. 9.
 Report of the Federal Horticultural Board, 1918. Pp. 19.
 Report of the Forester, 1918. Pp. 36.
 Report of the Insecticide and Fungicide Board, 1918. Pp. 6.
 Report of the Librarian, 1918. Pp. 16.
 Report of the Chief of the Bureau of Markets, 1918. Pp. 39.
 Report of the Acting Chief of the Bureau of Plant Industry, 1918. Pp. 30.
 Report of the Director of the Bureau of Public Roads, 1918. Pp. 20.
 Report of the Chief of the Division of Publications, 1918. Pp. 24.
 Report of the Chief of the Bureau of Soils, 1918. Pp. 8.
 Report of the Solicitor, 1918. Pp. 32.
 Report of the Director of the States Relations Service, 1918. Pp. 37.
 Report of the Chief of the Weather Bureau, 1918. Pp. 14.

SERIALS.

Journal of Agricultural Research. (For sale only.) Vol. 15, No. 3. Oct. 21, 1918. Contents: Effect of Hydrocyanic-Acid Gas under Vacuum Conditions on Subterranean Larvae. (pu O-1.) By E. R. Sasser and H. L. Sanford.—Catalase and Oxidase Content of Seeds in Relation to Their Dormancy, Age, Vitality, and Respiration. (pp G-159.) By William Crocker and George T. Harrington.—The Meadow Plant Bug, Miris dolabratus. (pv. Me-13.) Angular-Leafspot of Cucumber: Dissemination, Over-wintering, and Control. (pw G-160.) By Eubanks Carsner. Pp. 133-220, pls. 5, figs. 10. Price, 25 cents.

Same. Vol. 15, No. 4. Oct. 28, 1918. Contents: Plasticity of Biologic Forms of Puccinia graminis. (pz Minn-33.) By E. C. Stakman, F. J. Piemeisel, and M. N. Levine.—Experiments in Field Technic in Plot Tests. (py Minn-34.) By A. C. Arny and H. K. Hayes. Pp. 221-262, pl. 2. Price, 15 cents.

NOTE.—Beginning with volume 5 the Journal of Agricultural Research has been issued weekly and is distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. *It will not be sent free to individuals.* The Superintendent of Documents will receive subscriptions for this publication, the price being \$3 per year, 52 numbers.

Experiment Station Record. Vol. 39, No. 3. Abstract Number. Nov. 15, 1918. E. W. Allen, Ph. D., Editor. Pp. 201-300. Price, 15 cents.

NOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, 10 numbers each, at \$1 a volume.

The Monthly Crop Report. Vol. 4, No. 11, November, 1918. Pp. 133-144. (Bureau of Crop Estimates.)

Contains data relating to agriculture, including estimates of acreage, conditions, yield, prices, and value of crops and live stock. For free distribution.

SERVICE AND REGULATORY ANNOUNCEMENTS—FOR SALE ONLY.

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Bureau of Animal Industry. No. 137. September, 1918. Pp. 69-78. Nov. 8, 1918.
Price, 5 cents.

Bureau of Biological Survey. No. 25. Pp. 4. Nov. 30, 1918. Price, 5 cents.

Federal Horticultural Board. No. 56. September, 1918. Pp. 87-97. Nov. 6, 1918.
Price, 5 cents.

Insecticide and Fungicide Board. No. 22. Pp. 451-490. Nov. 16, 1918. Price, 5 cents.

SOIL SURVEYS.

All requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

Soil Survey of Lowndes County, Alabama. By L. R. Schoenmann and R. T. Avon Burke. Pp. 68, fig. 1, map. (From *F. O. Soils*, 1916.) Price, 15 cents.

Reconnaissance Soil Survey of the Lower San Joaquin Valley, California. By J. W. Nelson and J. E. Guernsey, of the University of California, and L. C. Holmes and E. C. Eckmann, of the U. S. Department of Agriculture. Pp. 157, pls. 3, fig. 1, map. (From *F. O. Soils*, 1915.) Price, 25 cents.

Soil Survey of Clay County, Iowa. By E. H. Smies, of the U. S. Department of Agriculture, and T. H. Benton, of the Iowa Agricultural Experiment Station. Pp. 45, fig. 1, map. (From *F. O. Soils*, 1916.) Price, 15 cents.

Soil Survey of Anoka County, Minnesota. By William G. Smith, of the U. S. Department of Agriculture, and George H. Nesom and E. G. Roth, of the University of Minnesota. Pp. 30, fig. 1, map. (From *F. O. Soils*, 1916.) Price, 15 cents.

Soil Survey of Barry County, Missouri. By A. T. Sweet, of the U. S. Department of Agriculture, and E. W. Knobel, of the University of Missouri. Pp. 44, pls. 3, fig. 1, map. (From *F. O. Soils*, 1916.) Price, 15 cents.

Soil Survey of Halifax County, North Carolina. By R. B. Hardison, of the U. S. Department of Agriculture, and L. L. Brinkley, of the North Carolina Department of Agriculture. Pp. 47, fig. 1, map. (From *F. O. Soils*, 1916.) Price, 15 cents.

Soil Survey of Stanly County, North Carolina. By R. C. Journey, of the U. S. Department of Agriculture, and S. O. Perkins, of the North Carolina Department of Agriculture. Pp. 34, fig. 1, map. (From *F. O. Soils*, 1916.) Price, 15 cents.

Soil Survey of Marion County, Ohio. By T. M. Morrison, Oliver Gossard, and G. K. Sivaslian, of the Ohio Agricultural Experiment Station. Pp. 37, fig. 1, map. (From *F. O. Soils*, 1916.) Price, 15 cents.

Soil Survey of Miami County, Ohio. By E. R. Allen and Oliver Gossard, of the Ohio Agricultural Station. Pp. 50, pls. 2, fig. 1, map. (From *F. O. Soils*, 1916.) Price, 15 cents.

Soil Survey of Bell County, Texas. By William T. Carter, Jr., H. G. Lewis, and H. W. Hawker. Pp. 46, fig. 1, map. (From *F. O. Soils*, 1916.) Price, 15 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. Vol. 46, No. 8. August, 1918. [Oct. 31, 1918.] Pp. 353-400, figs. 26, charts 9. Price, 25 cents per copy, \$2.50 per year. Payable to the Superintendent of Documents.

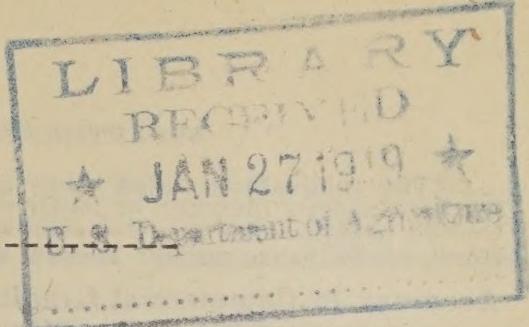
Special Articles: Solar and sky radiation during August, 1918. By H. H. Kimball.—Volcanic eruptions and solar radiation.—Halo phenomena observed during August, 1918. By W. R. Gregg.—South Carolina meteor of April 23, 1918. By R. H. Sullivan.—Photomicrographs of snow crystals and methods of reproduction. By W. A. Bentley.—Hot spell of August, 1918. By A. J. Henry.—Night-temperature studies in the Roswell fruit district. By C. Hallenbeck.—Ice storms in the southern Appalachians. By V. Rhoades.—Hourly frequency of precipitation in central Ohio and its relation to agricultural pursuits. By H. H. Martin.—Alleged manufacture of rain in southern California. By F. A. Carpenter.

Same. Supplement. No. 13. Aerology No. 8. I. Free-Air Data at Drexel and Ellendale Aerological Stations, April, May, and June, 1918. II. Notes on Kite Flying. By Vincent E. Jakl. Pp. 81, fig. 1. Nov. 12, 1918. Price, 25 cents.

National Weather and Crop Bulletin. Nos. 31, 32, November, 1918, reporting temperature, rainfall, and crop conditions throughout the United States. Issued weekly, on Wednesday, April to October; monthly remainder of year. Price, 25 cents a year.

EDWY B. REID,
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United States Department of Agriculture,

WASHINGTON, D. C., December 31, 1918.

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[DECEMBER, 1918.]

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Send all remittances to the Superintendent of Documents direct. His office is not a part of the Department of Agriculture.

FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

NOTE.—The department's supply of the current numbers of Farmers' Bulletins is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy.

Farm Practices that Increase Crop Yields in Kentucky and Tennessee. By J. H. Arnold, Agriculturist. Pp. 38, figs. 12. Contribution from the Office of Farm Management. (**Farmers' Bulletin 981.**)

For distribution in the territory named.

Cattle Scab and Methods of Control and Eradication. By Marion Imes, Zoological Division. Pp. 29, figs. 15. Contribution from the Bureau of Animal Industry. (**Farmers' Bulletin 1017.**)

Suitable for general distribution.

Laws Relating to Fur-Bearing Animals, 1918. A Summary of Laws in the United States, Canada, and Newfoundland, Relating to Trapping, Open Seasons, Propagation, and Bounties. By David E. Lantz, Assistant Biologist. Pp. 31. Contribution from the Bureau of Biological Survey. (**Farmers' Bulletin 1022.**)

For general distribution.

DEPARTMENTAL BULLETINS—TECHNICAL.

The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information, as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

Accuracy in Commercial Grading of Opened Eggs. By M. K. Jenkins, Assistant Bacteriologist, and Norman Hendrickson, Assistant Chemist, Food Research Laboratory. Pp. 27, pls. 5, figs. 3. Contribution from the Bureau of Chemistry. (Professional Paper.) Dec. 10, 1918. (Department Bulletin 391.) Price, 15 cents.

Of interest to dealers in and shippers of opened eggs.

Logging in the Douglas Fir Region. By William H. Gibbons, Forest Examiner. Pp. 256, figs. 83. Contribution from the Forest Service. (Professional Paper.) Nov. 14, 1918. (Department Bulletin 711.) Price, 30 cents.

A report on investigations relating to methods and costs of Douglas fir logging.
Not available for free distribution.

Small Sawmills, Their Equipment, Construction, and Operation. By Daniel F. Seerey, Logging Engineer. Pp. 68. Contribution from the Forest Service. Dec. 17, 1918. (Department Bulletin 718.) Price, 10 cents.

Of interest to portable sawmill operators.

Food Habits of the Mallard Ducks of the United States. By W. L. McAtee, Assistant Biologist. Pp. 35, pl. 1. Contribution from the Bureau of Biological Survey. (Professional Paper.) Dec. 23, 1918. (Department Bulletin 720.) Price, 5 cents.

This bulletin presents a technical study of the food habits of three species of mallard ducks—the mallard, the black duck, and the southern black duck.

Drainage Methods and Foundations for Country Roads. By E. W. James, General Inspector, Vernon M. Peirce, Assistant Engineer, and Charles H. Moorefield, Senior Highway Engineer. Pp. 86, pls. 12, figs. 14. Contribution from the Bureau of Public Roads. (Professional Paper.) Dec. 20, 1918. (Department Bulletin 724.) Price, 20 cents.

Of interest to highway engineers and officials generally.

Farm Practice in Growing Sugar Beets in Three Districts in Colorado, 1914–15. By L. A. Moorehouse, Agriculturist, R. S. Washburn, Scientific Assistant, and T. H. Summers, Scientific Assistant, Office of Farm Management, and S. B. Nuckols, Assistant Agriculturist, Office of Sugar Plant Investigations, Bureau of Plant Industry. Pp. 60, figs. 30. Contribution from the Office of Farm Management and the Bureau of Plant Industry. Dec. 14, 1918. (Department Bulletin 726.) Price, 10 cents.

Gives results of an investigation relative to the practice and costs of growing sugar beets in the district named.

Anthracnose of Cucurbits. By M. W. Gardner, Scientific Assistant, Cotton, Truck, and Forage Crop Disease Investigations. Pp. 68, pls. 8, figs. 15. Contribution from the Bureau of Plant Industry. (Professional Paper.) Dec. 18, 1918. (Department Bulletin 727.) Price, 15 cents.

A scientific discussion of the cause, life history, and control of anthracnose of the cucumber, muskmelon, watermelon, and certain gourds.

Certain Desert Plants as Emergency Stock Feed. By E. O. Wooton, Agriculturist. Pp. 31, pls. 8, fig. 1. Contribution from the Bureau of Plant Industry. Dec. 18, 1918. (Department Bulletin 728.) Price, 10 cents.

A description of several desert shrubs available for and of the method of preparation of same for emergency feed. Of interest to stock raisers in the arid regions.

Papers on Deciduous-Fruit Insects. I. The Grape Curculio. II. The Grape Root Borer. By Fred Brooks, Entomologist. III. Experiments in the Control of the Root Form of the Woolly Apple Aphis. By B. R. Leach, Scientific Assistant. Pp. 40, pls. 8, fig. 1. Contribution from the Bureau of Entomology. (Professional Paper.) Dec. 24, 1918. (Department Bulletin 730.) Price, 10 cents.

A technical description of the life history and habits of these insects and suggested methods for their control.

Effect of Grazing Upon Western Yellow Pine Reproduction in Central Idaho. By W. N. Sparhawk, Forest Examiner. Pp. 31, pls. 4. Contribution from the Forest Service. (Professional Paper.) Dec. 19, 1918. (Department Bulletin 738.) Price, 10 cents.

Suggests methods for handling stock on the Forest Reserves to avoid damage to growing timber.

MISCELLANEOUS.

Inventory of Seeds and Plants Imported by the Office of Foreign Seed and Plant Introduction during the Period from Oct. 1 to Dec. 31, 1915. Dec. 24, 1918. (Inventory No. 45. Nos. 41315 to 41684. Bureau of Plant Industry. Price, 15 cents.

Report of the Guam Agricultural Experiment Station, 1917. Pp. 62, pls. 7. Dec. 16, 1916. Price, 10 cents.

The Work of the Belle Fourche Reclamation Project Experiment Farm in 1917. By Beyer Aune, Farm Superintendent. Pp. 31, figs. 3. (W. A. I. Cir. 24, Bureau of Plant Industry.) Price, 5 cents.

The Work of the Scottsbluff Reclamation Project Experiment Farm in 1917. By James A. Holden, Farm Superintendent. Pp. 28, fig. 1. (W. I. A. Circ. 27, Bureau of Plant Industry.) Price, 5 cents.

The Work of the Yuma Reclamation Project Experiment Farm in 1917. By R. E. Blair, Farm Superintendent. Pp. 45, figs. 16. December, 1918. (W. I. A. Circ. 25, Bureau of Plant Industry.) Price, 10 cents.

SERIALS.

Journal of Agricultural Research. (For sale only.) Vol. 15, No. 5. Nov. 4, 1918. Contents: Fumigation of Cattleya Orchids with Hydrocyanic-Acid Gas. (qa O-2.) By E. R. Sascer and H. F. Dietz.—Net Energy Values of Alfalfa Hay and of Starch. (qb Pa-9.) By Henry Prentiss Armsby and J. August Fries.—Soil Factors Affecting the Toxicity of Alkali. (qc Utah-9.) By F. S. Harris and D. W. Pittman. Pp. 263-319, pls. 2, figs. 27. Price, 15 cents.

Same, Vol. 15, No. 6. Nov. 11, 1918. Contents: Soil Acidity as Affected by Moisture Conditions of the Soil. (qd Ind-4.) By S. D. Conner.—Determining the Absolute Salt Content of Soils by Means of the Freezing-Point Method. (qe Mich-9.) By George J. Bouyoucos and M. M. McCool.—Sweet-Potato Storage-Rots. (qf G-161.) By L. L. Harter, J. L. Weimer, and J. M. R. Adams. Pp. 321-368, pls. 7. Price, 20 cents.

Note.—Beginning with volume 5 the Journal of Agricultural Research has been issued weekly and is distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. *It will not be sent free to individuals.* The Superintendent of Documents will receive subscriptions for this publication, the price being \$3 per year, 52 numbers.

Experiment Station Record. Vol. 38, Index Number. Dec. 20, 1918. E. W. Allen, Ph. D., Editor. Pp. i-xxvii, 901-1001. Price, 15 cents.

Note.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, 10 numbers each, at \$1 a volume.

The Monthly Crop Report. Vol. 4, No. 12. December, 1918. Pp. 145-164. (Bureau of Crop Estimates.)

Contains data relating to agriculture, including estimates of acreage, conditions, yield, prices, and value of crops and live stock, and the crop summary for 1918. For free distribution.

SERVICE AND REGULATORY ANNOUNCEMENTS—FOR SALE ONLY.

Note. These contain *only* information, instructions, and notices governing the enforcement of the food and drugs act, meat inspection, 28-hour, and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. *Free distribution* is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale *only*, at prices noted.

Bureau of Animal Industry. No. 138. October, 1918. Pp. 71-88, Dec. 24, 1918. Price, 5 cents.

Bureau of Markets. No. 42. Pp. 12. Dec. 1, 1918. Price, 5 cents.

Bureau of Markets. No. 43. Pp. 10. Dec. 27, 1918. Price, 5 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

~~All~~ Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. Vol. 46, No. 9. September, 1918. [Dec. 7, 1918.]
Pp. 401-443, pls. 2, figs. 5, charts 9. Price, 25 cents per copy, \$2.50 per year.
Payable to the Superintendent of Documents.

Special Articles: Solar and sky radiation during September, 1918. By H. H. Kimball.—Wolfer provisional sunspot relative numbers. By H. H. Kimball.—Halo phenomena observed during September, 1918. By W. R. Gregg.—Capt. Schroeder establishes world altitude record.—Halo observations at York, N. Y. By M. N. Stewart.—Clouds and their significance in local weather forecasting. By A. H. Palmer.—Some correlations between solar activity and the climate of the Far East. By R. Sekiguchi.—Cumulus clouds of Hawaii. By A. M. Hamrick.—Some new facts about the center of typhoons. By C.-C. Chu.

National Weather and Crop Bulletin, No. 33, December, 1918, reporting temperature, rainfall, and crop conditions throughout the United States. Issued weekly, on Wednesday, April to October; monthly remainder of year. Price, 25 cents a year.

Snow and Ice Bulletins for December 3, 10, 17, 26, 1918. These bulletins are issued weekly during the winter season, based upon data from regular Weather Bureau stations, supplemented by reports from selected cooperative observers. Price, 25 cents a year.

EDWY B. REID,
Chief, Division of Publications.